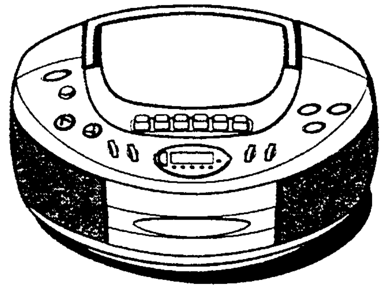
CSD-TD51 U(S),K(S),EZ(S)
CSD-TD52 U(W)
CSD-TD53 U(L)



SERVICE MANUAL

COMPACT DISC RADIO
CASSETTE RECORDER

• BASIC TAPE MECHANISM : TN-21ZVC-2000
• BASIC CD MECHANISM : DA11T3C

This Service Manual is the “Revision Publishing” and replaces “Simple Manual”
CSD-TD51 U(S)/TD52 U(W)/TD53 U(L)(S/M Code No. 09-003-343-3T1)
CSD-TD51 EZ(S),K(S)(S/M Code No. 09-003-343-3T2).

REVISION
DATA

S/M Code No. 09-003-343-3R1

SPECIFICATIONS

U MODEL

Tuner section
Frequency range, antenna — FM: 87.5 - 108.0 MHz Rod antenna, AM: 530/531 - 1,710/1,602 kHz (10/9 kHz step) Ferrite bar antenna

Deck section
Track format — 4 tracks, 2 channels / Frequency range — Normal tape: 50 - 12,500 Hz (EIAJ) / Recording system — AC bias / Erasing system — Magnet erase / Heads — Recording/playback head (1), Erasure head (1)

CD player section
Disc — Compact disc / Scanning method — Non-contact optical scanner (semiconductor laser)

General
Speaker — 80 mm cone type (2) / Output — Headphones jack (stereo mini-jack) / Power output — 2.5 W + 2.5 W (EIAJ 7 ohms DC) / Power requirements — DC 12 V using eight size C (R14) batteries, AC 120 V, 60 Hz / Power consumption — 15 W
Dimensions (W × H × D) — 302 × 162 × 253 mm (12 × 6$^1/_2$ × 10 in.)
Weight (excluding batteries) — 2.7 kg (5 lbs. 15 oz.)

- Design and specifications are subject to change without notice.

EZ MODEL

Tuner section
Frequency range, antenna — FM: 87.5 - 108.0 MHz Rod antenna, MW: 531/530 - 1,602/1,710 kHz (9/10 kHz step) Ferrite bar antenna, LW: 153 - 288 kHz Ferrite bar antenna

Deck section
Track format — 4 tracks, 2 channels / Frequency range — Normal tape: 50 - 12,500 Hz (EIAJ) / Recording system — AC bias / Erasing system — Magnet erase / Heads — Recording/playback head (1), Erasure head (1)

CD player section
Disc — Compact disc / Scanning method — Non-contact optical scanner (semiconductor laser)

General
Speaker — 80 mm cone type (2) / Output — Headphones jack (stereo mini-jack) / Power output — 2.9 W + 2.9 W (DIN MUSIC POWER), 2.5 W + 2.5 W (EIAJ 7 ohms DC), 1.9 W + 1.9 W (DIN 1% Rated Power) / Power requirements — DC 12 V using eight size C (R14) batteries, AC 230 V, 50 Hz / Power consumption — 14 W
Dimensions (W × H × D) — 302 × 162 × 253 mm
Weight (excluding batteries) — 2.7 kg

- Design and specifications are subject to change without notice.

K MODEL

Tuner section
Frequency range, antenna — FM: 87.5 - 108.0 MHz Rod antenna, MW: 531/530 - 1,602/1,710 kHz (9/10 kHz/step) Ferrite bar antenna, LW: 153 - 288 kHz Ferrite bar antenna

Deck section
Track format — 4 tracks, 2 channels / Frequency range — Normal tape: 50 - 12,500 Hz (EIAJ) / Recording system — AC bias / Erasing system — Magnet erase / Heads — Recording/playback head (1), Erasure head (1)

CD player section
Disc — Compact disc / Scanning method — Non-contact optical scanner (semiconductor laser)

General
Speaker — 80 mm cone type (2) / Output — Headphones jack (stereo mini-jack) / Power output — 2.5 W + 2.5 W (EIAJ 7 ohms DC), 1.9 W + 1.9 W (DIN 1% Rated Power) / Power requirements — DC 12 V using eight size C (R14) batteries, AC 230 V, 50 Hz / Power consumption — 14 W
Dimensions (W × H × D) — 302 × 162 × 253 mm
Weight (excluding batteries) — 2.7 kg

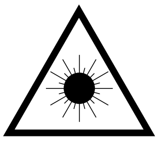
- Design and specifications are subject to change without notice.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynling laserståling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION

L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!

Usynlig laserståling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

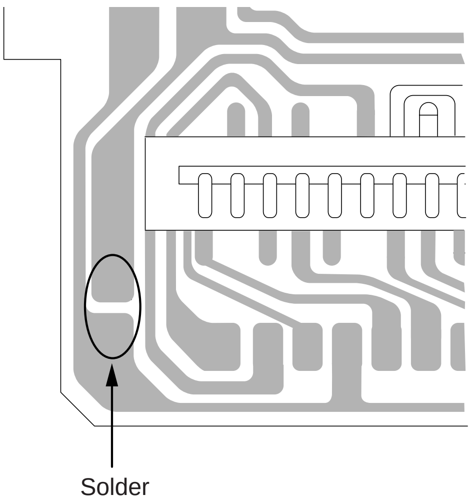
This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

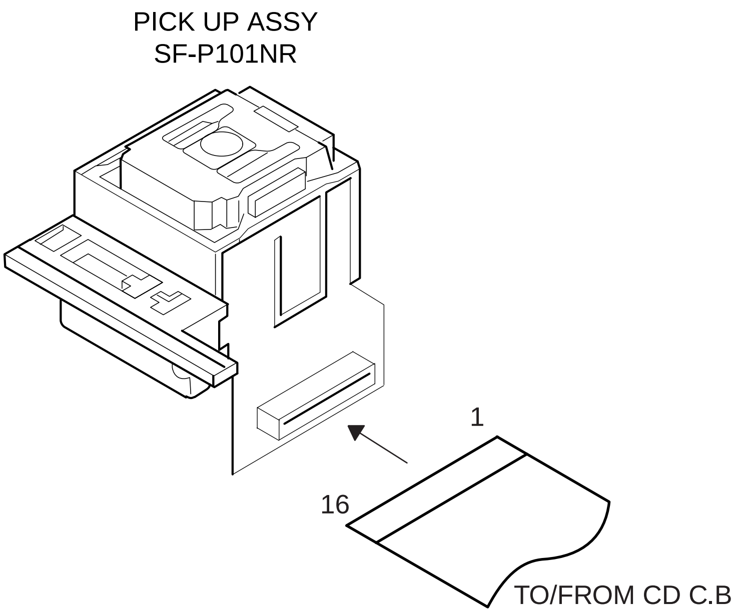
CLASS 1	LASER PRODUCT
KLASSE 1	LASER PRODUKT
LUOKAN 1	LASER LAITE
KLASS 1	LASER APPARAT

Precaution to replace Optical block (SF-P101NR)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in the right figure.





ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

IC

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
	87-A21-550-010		IC,TA2149N
	87-A21-185-040		C-IC,LC72121M
	87-A21-064-010		IC,LA4227
	87-A21-520-040		C-IC,M61509FP
	87-A20-446-010		C-IC,LA9241ML
	87-A20-459-010		C-IC,LC78622ED
	87-A21-093-010		IC,LA6541D
	8A-CH4-661-010		C-IC,LC867132V-5P07
	87-A21-431-010		IC,BA4560N

TRANSISTOR

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
	89-327-143-080		TR,2SC2714 (0.1W)
	87-026-447-080		TR,2SC1740S R
	89-111-624-080		TR,2SA1162Y
	87-026-213-080		CHIP-TR,DTC114YK
	89-503-025-010		C-FET,2SK302GR<51 K<S>,51 EZ<S>>
	89-320-011-080		TR,2SC2001 (15W)<51 K<S>,51 EZ<S>>
	87-026-230-080		CHIP-TR,DTA114YK<51 K<S>,51 EZ<S>>
	89-327-125-080		CHIP TR,2SC2712GR
	89-112-965-080		TR,2SA1296 (0.75W)
	87-026-463-080		TR,2SA933S (0.3W)
	87-026-291-080		TR,DTC124XS
	89-213-702-080		TR,2SB1370E
	87-026-462-080		TR,2SC1740 S(RS 0.3W)
	89-318-154-080		TR,2SC1815 (0.4W)
	89-109-332-380		TR,2SA933RS
	89-113-187-080		TR,2SA1318TU
	87-026-295-080		TR,DTC144TK
	87-026-237-080		CHIP-TR,DTC124XK
	87-026-239-080		TR,DTC114TK (0.2W)
	87-026-464-080		TR,DTC114TS (0.3W)

DIODE

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
	87-070-345-080		DIODE,IN4148
	87-A40-616-070		VARI-CAP,SVC384(S/T)
	87-A40-128-080		C-VARI-CAP,HVU202A
	87-017-072-080		ZENER,HZS3B1
	87-027-399-080		ZENER,HZ7A3L (200MA)<51 U<S>,53 U<L>,52 U<W>>
	87-027-607-080		ZENER,HZ7B3L<51 K<S>,51 EZ<S>>
	87-A40-648-080		ZENER,MTZJ8.2A
	87-017-978-080		DIODE,1N4003
	87-020-465-080		DIODE,1SS133 (110MA)
	87-027-702-080		DIODE,ZENER HZ6C2L (200MA)
	87-A40-465-010		DIODE,FR202

MAIN C.B

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C211	87-A11-603-080		CAP, S 0.05-16
C212	87-A11-603-080		CAP, S 0.15-16
C215	87-016-460-080		C-CAP,S 0.22-16 B
C216	87-016-460-080		C-CAP,S 0.22-16 B
C231	87-010-213-080		C-CAP,S 0.015-50 B
C232	87-010-213-080		C-CAP,S 0.015-50 B
C233	87-A10-201-080		C-CAP,S0.33-16 KB
C234	87-A10-201-080		C-CAP,S0.33-16 KB
C235	87-016-669-080		C-CAP,S 0.1-25 K B
C236	87-016-669-080		C-CAP,S 0.1-25 K B
C237	87-010-371-080		CAP, ELECT 470-50V
C239	87-010-197-080		CAP, CHIP 0.01 DM
C240	87-010-197-080		CAP, CHIP 0.01 DM
C247	87-010-401-080		CAP, ELECT 1-50V
C248	87-010-401-080		CAP, ELECT 1-50V
C310	87-010-248-080		CAP, ELECT 220-10V
C316	87-010-263-080		CAP,E 100-10
C317	87-010-197-080		CAP, CHIP 0.01 DM
C801	87-010-248-080		CAP, ELECT 220-10V
C805	87-012-365-080		C-CAP,S 0.027-25VBK
C806	87-012-365-080		C-CAP,S 0.027-25VBK
C807	87-010-405-080		CAP, ELECT 10-50V
C808	87-010-405-080		CAP, ELECT 10-50V
C809	87-010-401-080		CAP, ELECT 1-50V
C810	87-010-401-080		CAP, ELECT 1-50V
C811	87-010-178-080		CHIP CAP 1000P
C812	87-010-178-080		CHIP CAP 1000P
C816	87-010-180-080		C-CER 1500P
C817	87-010-180-080		C-CER 1500P
C821	87-010-401-080		CAP, ELECT 1-50V
C822	87-010-401-080		CAP, ELECT 1-50V
C823	87-010-178-080		CHIP CAP 1000P
C824	87-010-178-080		CHIP CAP 1000P
C829	87-010-178-080		CHIP CAP 1000P
C830	87-010-178-080		CHIP CAP 1000P
C833	87-018-195-080		CAP, CER 1200P-16V
C834	87-010-248-080		CAP, ELECT 220-10V
C835	87-010-322-080		C-CAP,S 100P-50 CH
C836	87-010-322-080		C-CAP,S 100P-50 CH
C843	87-010-197-080		CAP, CHIP 0.01 DM
C844	87-018-124-080		CAP, CER 270P-50V
C845	87-010-178-080		CHIP CAP 1000P
C846	87-010-263-080		CAP, ELECT 100-10V
C851	87-010-186-080		CAP,CHIP 4700P
C852	87-010-178-080		CHIP CAP 1000P
C853	87-018-211-080		CAP, CER 0.01-50
CN201	87-099-018-010		CONN,16P
CN801	87-A60-110-010		CONN,4P V S2M-4W
CNA302	8A-CD9-629-010		CONN ASSY,6P MA-TU
CNA801	8A-CD9-630-010		CONN ASSY, 4P RPH
L801	87-007-342-010		COIL,OSC 85K BIAS
SW801	8Z-CD9-609-010		SW,SL 1-6-2 PS62D01

CD C.B

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C30	87-010-260-080		CAP, ELECT 47-25V
C251	87-010-404-080		CAP, ELECT 4.7-50V
C261	87-010-402-080		CAP, ELECT 2.2-50V
C262	87-010-402-080		CAP, ELECT 2.2-50V
C263	87-010-178-080		CHIP CAP 1000P
C264	87-010-178-080		CHIP CAP 1000P
C265	87-010-263-080		CAP, ELECT 100-10V
C266	87-010-263-080		CAP, ELECT 100-10V
C267	87-010-112-080		CAP, ELECT 100-16V
C268	87-010-112-080		CAP, ELECT 100-16V
C271	87-010-237-080		CAP, ELECT 1000-16V
C272	87-010-237-080		CAP, ELECT 1000-16V
C278	87-010-405-080		CAP, ELECT 10-50V
C279	87-010-385-080		CAP, ELECT 220-25V
C301	87-016-495-000		CAP,E 3300-25 M SMG
C306	87-010-404-080		CAP, ELECT 4.7-50V
C307	87-010-401-080		CAP, ELECT 1-50V
C308	87-010-221-080		CAP, ELECT 470-10V
C311	87-010-263-080		CAP, ELECT 10-10V
C312	87-010-385-080		CAP, ELECT 220-25V
C321	87-010-197-080		CAP, CHIP 0.01 DM
C322	87-010-263-080		CAP, ELECT 100-10V
C325	87-010-405-080		CAP, ELECT 10-50V
C401	87-010-403-080		CAP, ELECT 3.3-50V
C402	87-010-197-080		CAP, CHIP 0.01 DM
C403	87-010-263-080		CAP, ELECT 100-10V
C404	87-010-248-080		CAP, ELECT 220-10V
C405	87-010-197-080		CAP, CHIP 0.01 DM
C406	87-010-374-080		CAP, ELECT 47-10V
C407	87-010-178-080		CHIP CAP 1000P
C408	87-010-198-080		CAP, CHIP 0.022
C409	87-010-248-080		CAP, ELECT 220-10V

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C410	87-010-263-080		CAP, ELECT 100-10V
C411	87-A11-177-080		C-CAP,S 0.15-16 K B
C412	87-010-401-080		CAP, ELECT 1-50V
C413	87-016-369-080		C-CAP,S 0.033-25 B K
C414	87-010-405-080		CAP, ELECT 10-50V
C416	87-010-545-080		CAP, ELECT 0.22-50V
C417	87-012-157-080		C-CAP,S 330P-50 CH
C418	87-010-213-080		C-CAP,S 0.015-50 B
C419	87-A11-608-080		C-CAP,S 0.33-25 K B
C420	87-016-369-080		C-CAP,S 0.033-25 B K
C421	87-A11-177-080		C-CAP,S 0.15-16 K B
C422	87-010-183-080		C-CAP,S 2700P-50 B
C423	87-010-956-080		CHIP-CAP,S 0.068-25B
C424	87-010-993-080		C-CAP,S 0.056-25 B
C425	87-010-176-080		C-CAP,S 680P-50 SL
C426	87-A11-608-080		C-CAP,S 0.33-25 K B
C428	87-010-197-080		CAP, CHIP 0.01 DM
C429	87-010-186-080		CAP,CHIP 4700P
C430	87-012-156-080		C-CAP,S 220P-50 CH
C431	87-010-545-080		CAP, ELECT 0.22-50V
C432	87-010-374-080		CAP, ELECT 47-10V
C433	87-010-401-080		CAP, ELECT 1-50V
C434	87-010-184-080		CHIP CAPACITOR 3300P(K)
C435	87-010-197-080		CAP, CHIP 0.01 DM
C436	87-010-374-080		CAP, ELECT 47-10V
C437	87-010-404-080		CAP, ELECT 4.7-50V
C438	87-016-669-080		C-CAP,S 0.1-25 K B
C439	87-010-178-080		CHIP CAP 1000P
C440	87-010-145-080		C-CAP, S 1P-50 C CH
C441	87-010-197-080		CAP, CHIP 0.01 DM
C442	87-010-312-080		C-CAP,S 15P-50 CH
C445	87-012-368-080		C-CAP,S 0.1-50 F
C446	87-012-368-080		C-CAP,S 0.1-50 F
C447	87-012-368-080		C-CAP,S 0.1-50 F
C448	87-010-315-080		C-CAP,S 27P-50 CH
C450	87-012-140-080		CAP 470P
C451	87-012-156-080		C-CAP,S 220P-50 CH
C455	87-010-247-080		CAP, ELECT 100-50V
C457	87-010-312-080		C-CAP,S 15P-50 CH
C458	87-010-312-080		C-CAP,S 15P-50 CH
C459	87-010-263-080		CAP, ELECT 100-10V
C460	87-015-819-080		CAPACITOR,0.01
C461	87-010-197-080		CAP, CHIP 0.01 DM
C462	87-010-248-080		CAP, ELECT 220-10V
C463	87-010-197-080		CAP, CHIP 0.01 DM
C465	87-010-404-080		CAP, ELECT 4.7-50V
C466	87-012-368-080		C-CAP,S 0.1-50 F
C467	87-010-263-080		CAP, ELECT 100-10V
C469	87-012-154-080		C-CAP,S 150P-50 CH
C470	87-010-544-080		CAP, ELECT 0.1-50V
C471	87-015-785-080		CHIP CAPACITOR, 0.1FZ-25Z
C472	87-015-785-080		CHIP CAPACITOR, 0.1FZ-25Z
C473	87-015-785-080		CHIP CAPACITOR, 0.1FZ-25Z
C474	87-015-785-080		CHIP CAPACITOR, 0.1FZ-25Z
C475	87-010-197-080		CAP, CHIP 0.01 DM
C476	87-010-236-080		CAP,E 1000-10 SME
C477	87-010-197-080		CAP, CHIP 0.01 DM
C478	87-010-263-080		CAP, ELECT 100-10V
C479	87-010-197-080		CAP, CHIP 0.01 DM
C480	87-010-221-080		CAP, ELECT 470-10V
C481	87-010-405-080		CAP, ELECT 10-50V
C482	87-010-405-080		CAP, ELECT 10-50V
C489	87-012-368-080		C-CAP,S 0.1-50 F
C490	87-012-368-080		C-CAP,S 0.1-50 F
C491	87-010-197-080		CAP, CHIP 0.01 DM
C492	87-010-221-080		CAP, ELECT 470-10V
C494	87-010-197-080		CAP, CHIP 0.01 DM
C495	87-016-669-080		C-CAP,S 0.1-25 K B
C501	87-012-368-080		C-CAP,S 0.1-50 F
C502	87-010-322-080		C-CAP,S 100P-50 CH
C503	87-010-322-080		C-CAP,S 100P-50 CH
C504	87-010-322-080		C-CAP,S 100P-50 CH
C505	87-010-322-080		C-CAP,S 100P-50 CH
C506	87-010-322-080		C-CAP,S 100P-50 CH
C510	87-016-669-080		C-CAP,S 0.1-25 K B
C831	87-010-198-080		CAP, CHIP 0.022
CN202	8A-CH4-689-010		CONN,3P V 2.5
CN205	87-A60-109-010		CONN,2P V S2M-2W
CN301	8A-CH4-689-010		CONN,3P V 2.5
CN401	87-A60-424-010		CONN,16P V TOC-B
CN403	87-099-201-010		CONN,8P 6216 H
CN802	8A-CH4-687-010		CONN,4P V 2.5
CNA205	8A-CD9-631-010		CONN ASSY, 2P DOOR
CNA402	8A-CD9-625-010		CONN ASSY,6P CD-ME
CNA802	8A-CD9-631-010		CONN ASSY, 4P TP-ME
L401	87-003-102-080		COIL, 10UH
L404	87-003-152-080		COIL, 100UH
SFR430	87-024-437-080		SFR100K,RH063EC
SW205	87-036-389-010		SW, PUSH 1-1-1 R8120125
X401	8Z-CD5-633-010		VIB, CER16.93MHZ FCR16.93M2

FRONT C.B

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C601	87-010-313-080		CAP, CHIP 18P
C602	87-010-315-080		C-CAP,S 27P-50 CH
C603	87-010-319-080		C-CAP,S 56P-50 CH
C604	87-010-312-080		C-CAP,S 15P-50 CH
C605	87-010-317-080		C-CAP,S 39P-50 CH
C607	87-010-196-080		CHIP CAPACITOR,0.1-25
C608	87-010-196-080		CHIP CAPACITOR,0.1-25
C610	87-010-555-040		CAP,E 100-10 GAS
C611	87-010-196-080		CHIP CAPACITOR,0.1-25
C612	87-A10-189-040		CAP,E 220-10
C613	87-010-495-040		CAP,E 2.2-50 GAS
C614	87-010-196-080		CHIP CAPACITOR,0.1-25
C615	87-010-493-040		CAP,E 0.47-50 GAS
C616	87-010-494-040		CAP,E 1-50 GAS
C620	87-015-785-080		CHIP CAPACITOR, 0.1FZ-25Z
C625	87-A12-317-080		C-CAP,U 0.1-50 Z F
C627	87-010-196-080		CHIP CAPACITOR,0.1-25
C629	87-A12-317-080		C-CAP,U 0.1-50 Z F
C630	87-A12-317-080		C-CAP,U 0.1-50 Z F
C631	87-A12-317-080		C-CAP,U 0.1-50 Z F
C632	87-A12-317-080		C-CAP,U 0.1-50 Z F
C633	87-A12-317-080		C-CAP,U 0.1-50 Z F
C635	87-012-195-080		C-CAP,S 100P-50 J CH
C636	87-012-195-080		C-CAP,S 100P-50 J CH
C637	87-012-195-080		C-CAP,S 100P-50 J CH
C638	87-012-195-080		C-CAP,S 100P-50 J CH
C639	87-012-195-080		C-CAP,S 100P-50 J CH
C640	87-012-195-080		C-CAP,S 100P-50 J CH
C641	87-012-195-080		C-CAP,S 100P-50 J CH
C642	87-012-195-080		C-CAP,S 100P-50 J CH
C643	87-012-195-080		C-CAP,S 100P-50 J CH
C644	87-012-195-080		C-CAP,S 100P-50 J CH
C645	87-012-195-080		C-CAP,S 100P-50 J CH
C646	87-012-195-080		C-CAP,S 100P-50 J CH
C647	87-012-195-080		C-CAP,S 100P-50 J CH
C648	87-012-195-080		C-CAP,S 100P-50 J CH
C649	87-012-195-080		C-CAP,S 100P-50 J CH
C650	87-012-195-080		C-CAP,S 100P-50 J CH
C651	87-012-195-080		C-CAP,S 100P-50 J CH
C652	87-012-195-080		C-CAP,S 100P-50 J CH
C653	87-012-195-080		C-CAP,S 100P-50 J CH
C654	87-012-195-080		C-CAP,S 100P-50 J CH
C655	87-012-195-080		C-CAP,S 100P-50 J CH
C656	87-012-195-080		C-CAP,S 100P-50 J CH
C657	87-012-195-080		C-CAP,S 100P-50 J CH
C658	87-A12-317-080		C-CAP,U 0.1-50 Z F
CN601	87-099-033-010		CONN,16P 6216 H

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
CN602	87-099-201-010		CONN,8P 6216 H
CNA603	8A-CD9-624-010		CONN ASSY,4P TU-FR
CNA604	8A-CD9-623-010		CONN ASSY,4P KEY
L601	87-003-102-080		COIL, 10UH
LCD601	8Z-CH4-635-010		LCD,HLC7365 ZCH-4
LED602	88-CD6-630-010		LED,934ID RED
LED603	88-CD6-630-010		LED,934ID RED
LED604	88-CD6-630-010		LED,934ID RED
LED606	88-CD6-630-010		LED,934ID RED
LED607	88-CD6-630-010		LED,934ID RED
LED608	88-CD6-630-010		LED,934ID RED
LED610	88-CD6-631-010		LED,934GD GRN
S601	87-A90-164-080		SW,TACT SKQAB(N)
S604	87-A90-164-080		SW,TACT SKQAB(N)
S605	87-A90-164-080		SW,TACT SKQAB(N)
S606	87-A91-704-080		SW,TACT EVQ 214 05R
S607	87-A91-704-080		SW,TACT EVQ 214 05R
S611	87-A90-164-080		SW,TACT SKQAB(N)
S613	87-A90-164-080		SW,TACT SKQAB(N)
S614	87-A91-704-080		SW,TACT EVQ 214 05R
S615	87-A91-704-080		SW,TACT EVQ 214 05R
X601	87-030-273-010		VIB,XTAL 32.768K5PPM
X602	87-030-376-080		VIB,CER CSA5.76MG200

TUNER C.B

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C1	87-010-314-080		C-CAP,S 22P-50V
C2	87-010-316-080		C-CAP,S 33P-50 CH
C3	87-010-314-080		C-CAP,S 22P-50V
C5	87-A11-067-080		C-CAP,S 1-10 K B
C6	87-010-313-080		CAP, CHIP 18P<51 U<S>,53 U<L>,52 U<W>>
C7	87-014-049-080		CAP,PP 470P-100 J
C8	87-012-349-080		C-CAP,S 1000P-50 CH
C10	87-010-197-080		CAP, CHIP 0.01 DM
C11	87-010-197-080		CAP, CHIP 0.01 DM
C12	87-010-197-080		CAP, CHIP 0.01 DM
C13	87-010-150-080		C-CAP,S 6P-50 CH
C14	87-010-303-080		C-CAP,S 330P-50CH
C15	87-012-349-080		C-CAP,S 1000P-50 CH
C16	87-010-374-080		CAP, ELECT 47-10V
C17	87-010-198-080		CAP, CHIP 0.022
C18	87-015-835-080		C-CAP,0.047 D
C19	87-010-263-080		CAP, ELECT 100-10V
C20	87-010-404-080		CAP, ELECT 4.7-50V
C21	87-010-197-080		CAP, CHIP 0.01 DM
C22	87-010-197-080		CAP, CHIP 0.01 DM
C23	87-010-197-080		CAP, CHIP 0.01 DM
C24	87-015-770-080		C-CHIP,330P(SL)K
C25	87-016-460-080		C-CAP,S 0.22-16 B
C27	87-A11-067-080		C-CAP,S 1-10 K B
C28	87-016-669-080		C-CAP,S 0.1-25 K B
C29	87-016-669-080		C-CAP,S 0.1-25 K B
C30	87-010-213-080		C-CAP,S 0.015-50 B<51 K<S>,51 EZ<S>>
C30	87-010-198-080		CAP, CHIP 0.022<51 U<S>,53 U<L>,52 U<W>>
C31	87-010-213-080		C-CAP,S 0.015-50 B<51 K<S>,51 EZ<S>>
C31	87-010-198-080		CAP, CHIP 0.022<51 U<S>,53 U<L>,52 U<W>>
C33	87-012-358-080		C-CAP,S 0.47-10 F Z
C34	87-012-358-080		C-CAP,S 0.47-10 F Z
C35	87-015-819-080		CAPACITOR,0.01
C36	87-010-263-080		CAP, ELECT 100-10V
C37	87-010-197-080		CAP, CHIP 0.01 DM
C38	87-010-374-080		CAP, ELECT 47-10V
C39	87-010-404-080		CAP, ELECT 4.7-50V
C40	87-010-197-080		CAP, CHIP 0.01 DM
C41	87-012-349-080		C-CAP,S 1000P-50 CH
C42	87-012-349-080		C-CAP,S 1000P-50 CH
C43	87-012-349-080		C-CAP,S 1000P-50 CH
C44	87-010-311-080		CAP 12P
C45	87-010-312-080		C-CAP,S 15P-50 CH
C46	87-010-197-080		CAP, CHIP 0.01 DM
C47	87-010-197-080		CAP, CHIP 0.01 DM
C48	87-010-197-080		CAP, CHIP 0.01 DM
C49	87-012-140-080		CAP 470P
C50	87-010-197-080		CAP, CHIP 0.01 DM
C51	87-010-316-080		C-CAP,S 33P-50 CH
C52	87-010-197-080		CAP, CHIP 0.01 DM
C53	87-010-197-080		CAP, CHIP 0.01 DM
C54	87-014-055-080		CAP,PP 820P-100 J<51 K<S>,51 EZ<S>>
C55	87-010-197-080		CAP, CHIP 0.01 DM
C71	87-010-197-080		CAP, CHIP 0.01 DM
C72	87-010-263-080		CAP, ELECT 100-10V
C73	87-010-197-080		CAP, CHIP 0.01 DM
C75	87-010-197-080		CAP, CHIP 0.01 DM
C91	87-012-140-080		CAP 470P
C92	87-010-197-080		CAP, CHIP 0.01 DM
C93	87-010-197-080		CAP, CHIP 0.01 DM
CF1	87-A91-094-010		FLTR,CDA10.7 MG80A
CF2	87-008-261-010		FILTER, SFE10.7MA5-A
CF3	87-008-261-010		FILTER, SFE10.7MA5-A
CN2	87-099-854-010		CONN,6P S2M-6W
CN3	87-A60-110-010		CONN,4P V S2M-4W
CN605	87-A60-113-010		CONN,2P H S2M-2WR
HD1	88-CD6-661-010		HLDR,BAR ANT.
HD2	88-CD6-661-010		HLDR,BAR ANT.
L2	87-A50-560-010		COIL,FM BPF(ACD)
L3	8A-CH4-670-010		BAR-ANT,MW 2B-ACH(COI)<51 U<S>,53 U<L>,52 U<W>>
L3	8A-CH4-671-010		BAR-ANT,MW/LW 3B-ACH(COI)<51 K<S>,51 EZ<S>>
L4	87-A50-420-010		COIL,MW OSC(SYN)
L5	87-A50-566-010		COIL,FM RF EX(ACH)
L6	87-A50-567-010		COIL,FM OSC(ACH)
L7	87-A91-308-010		FLTR,PCFAZH- 450T (TOK)
L8	87-005-849-080		COIL,10UH(CECS)
L51	87-A50-421-010		COIL,LW OSC(SYN)<51 K<S>,51 EZ<S>>
LED601	88-CD6-630-010		LED,934ID RED
LED609	88-CD6-630-010		LED,934ID RED
TC1	87-011-254-080		TRIMER,20P LAR
TC51	87-A91-659-010		TRIMMER,50P 4.0X4.5 ECRL<51 K<S>,51 EZ<S>>
X1	87-A70-061-010		VIB,XTAL 4.500MHZ CSA-309

H.P. CB

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
CN101	8A-CD9-628-010		CONN ASSY,3P MA-HP
CN102	87-A60-685-010		CONN,4P H WHT EH
HP1	87-A60-569-010		JACK,HTJ-035-18

BATT1 C.B

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C901	87-010-192-080		C-CAP,S 0.022-50 F
C902	87-010-192-080		C-CAP,S 0.022-50 F
C903	87-010-192-080		C-CAP,S 0.022-50 F
C904	87-010-192-080		C-CAP,S 0.022-50 F
CNA901	8A-CD9-627-010		CONN ASSY,3P PWR
⚠PR901	87-A90-092-080		PROTECTOR,2.5A 491<51 K<S>,51 EZ<S>>
SP901	87-CD6-213-010		SPR-C,BATT (-)
SP902	87-CD6-213-010		SPR-C,BATT (-)

BATT2 C.B

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
SP903	87-CD6-213-010		SPR-C,BATT (-)
SP904	87-CD6-213-010		SPR-C,BATT (-)

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
MOTOR C.B			
M2	9X-262-576-910		MOTOR GEAR ASSY
PIN3	91-564-722-110		CONNECTOR 6P
SW1	91-572-085-120		LEAF SW
KEY C.B			
S608	87-A91-704-080		SW,TACT EVQ 214 05R
S609	87-A90-164-080		SW,TACT SKQAB(N)
S610	87-A90-164-080		SW,TACT SKQAB(N)

- Regarding connectors, they are not stocked as they are not the initial order items.
  The connectors are available after they are supplied from connector manufacturers upon the order is received.

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding

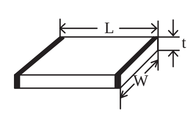
8 8 − □□□ □□ □

A
抵抗部品コード
Resistor Code

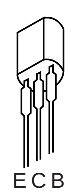
抵抗値
Value of resistor

桁表示
Figure

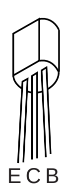
チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm) 外形／Form	L	W	t	抵抗コード : A Resistor Code : A
1/16W	1005	±5%	CJ		1.0	0.5	0.35	104
1/16W	1608	±5%	CJ		1.6	0.8	0.45	108
1/10W	2125	±5%	CJ		2	1.25	0.45	118
1/8W	3216	±5%	CJ		3.2	1.6	0.55	128

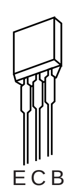
TRANSISTOR ILLUSTRATION



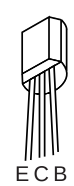
2SA1296



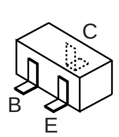
2SC1815
2SC2001



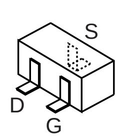
2SA933
2SC1740
DTC114TS
DTC124XS



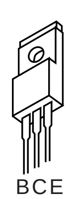
2SA1318



2SA1162
2SC2712
2SC2714
DTA114YK
DTC114TK
DTC114YK
DTC124XK
DTC144TK

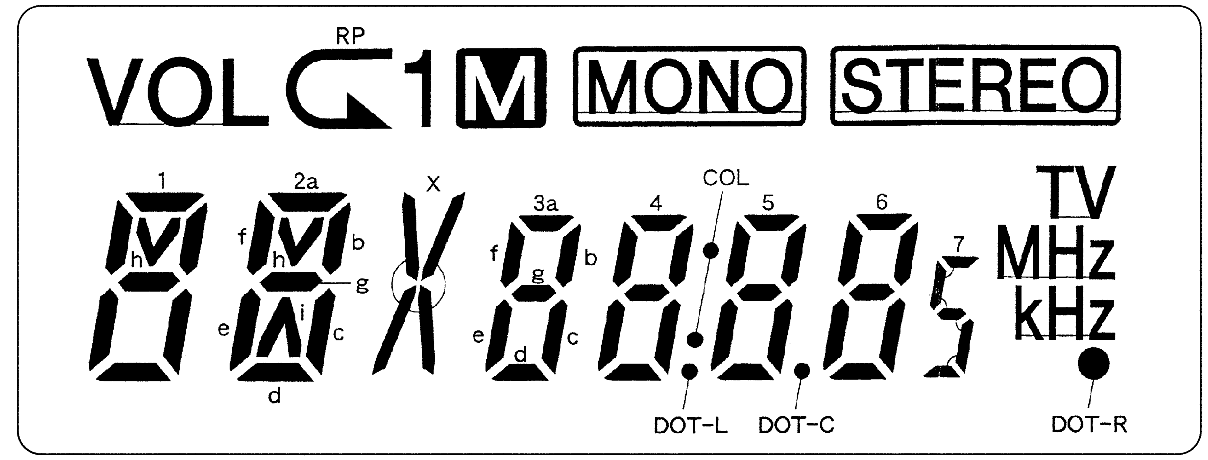


2SK302

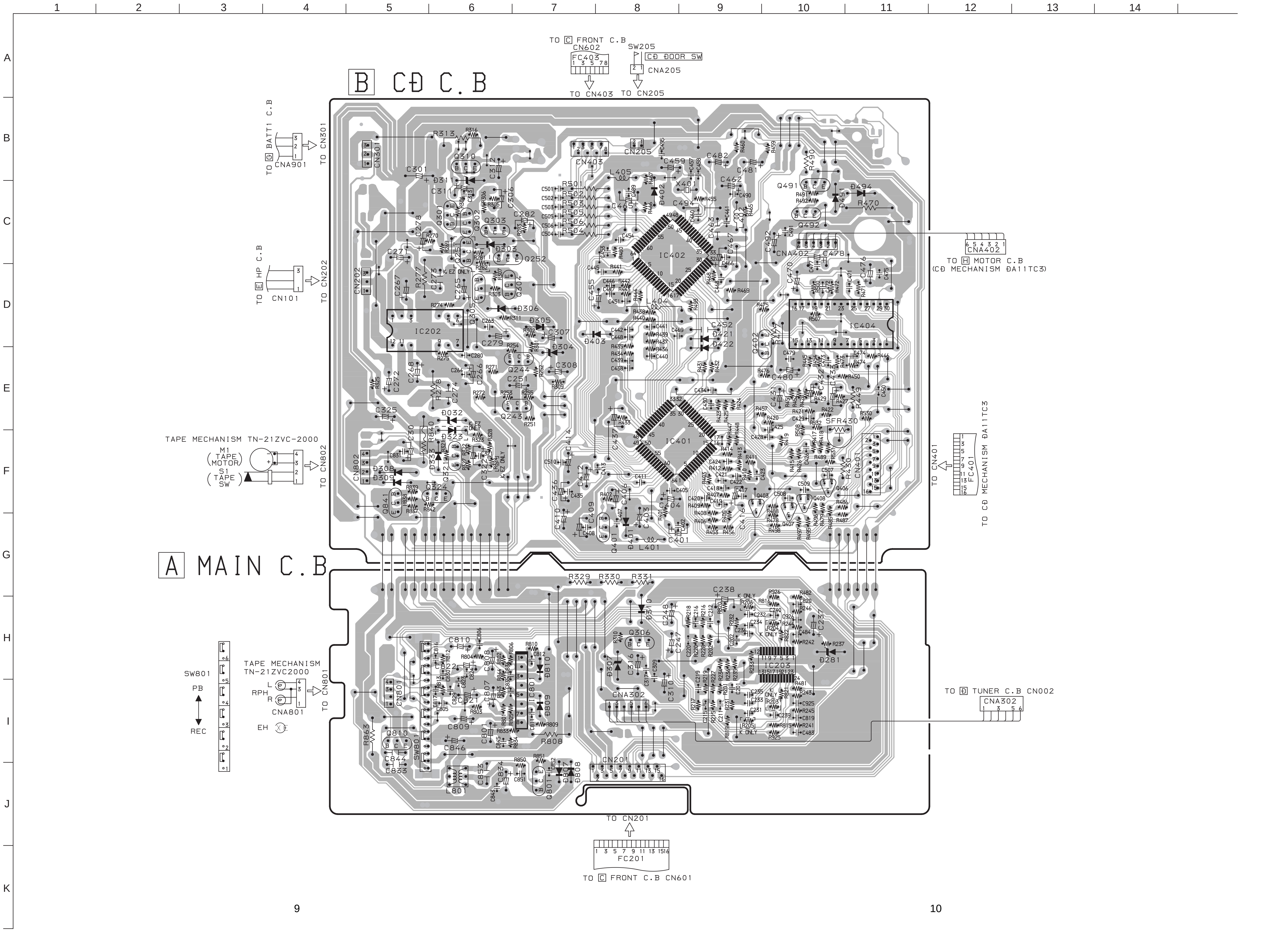


2SB1370

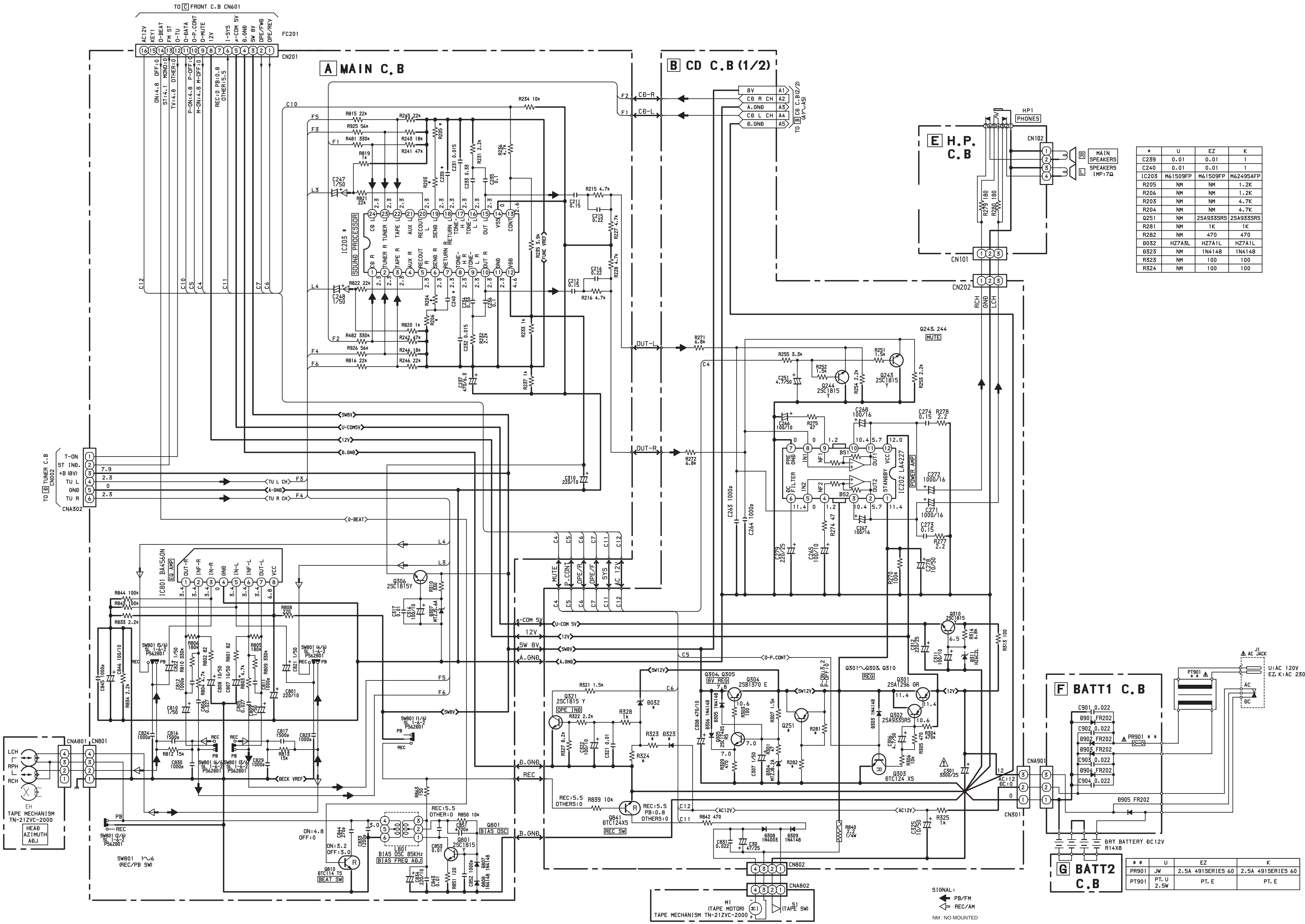
LCD DISPLAY



No	COM1	COM2	COM3
1	2b	2c	2d
2	1b	1c	1d
3	1a	1f	1e
4	1h	1g	VOL
5	2a	2f	2e
6	2h	2g	2 i
7	3f	3e	RP
8	3a	3g	3d
9	3b	3c	1
10	4f	4e	M
11	4a	4g	4d
12	4b	4c	X
13	COL	DOT-L	MONO
14	5f	5e	DOT-R
15	5a	5g	5d
16	5b	5c	DOT-C
17	6f	6e	STEREO
18	6a	6g	6d
19	6b	6c	7
20	TV	MHz	kHz
21	COM1	——	——
22	——	COM2	——
23	——	——	COM3

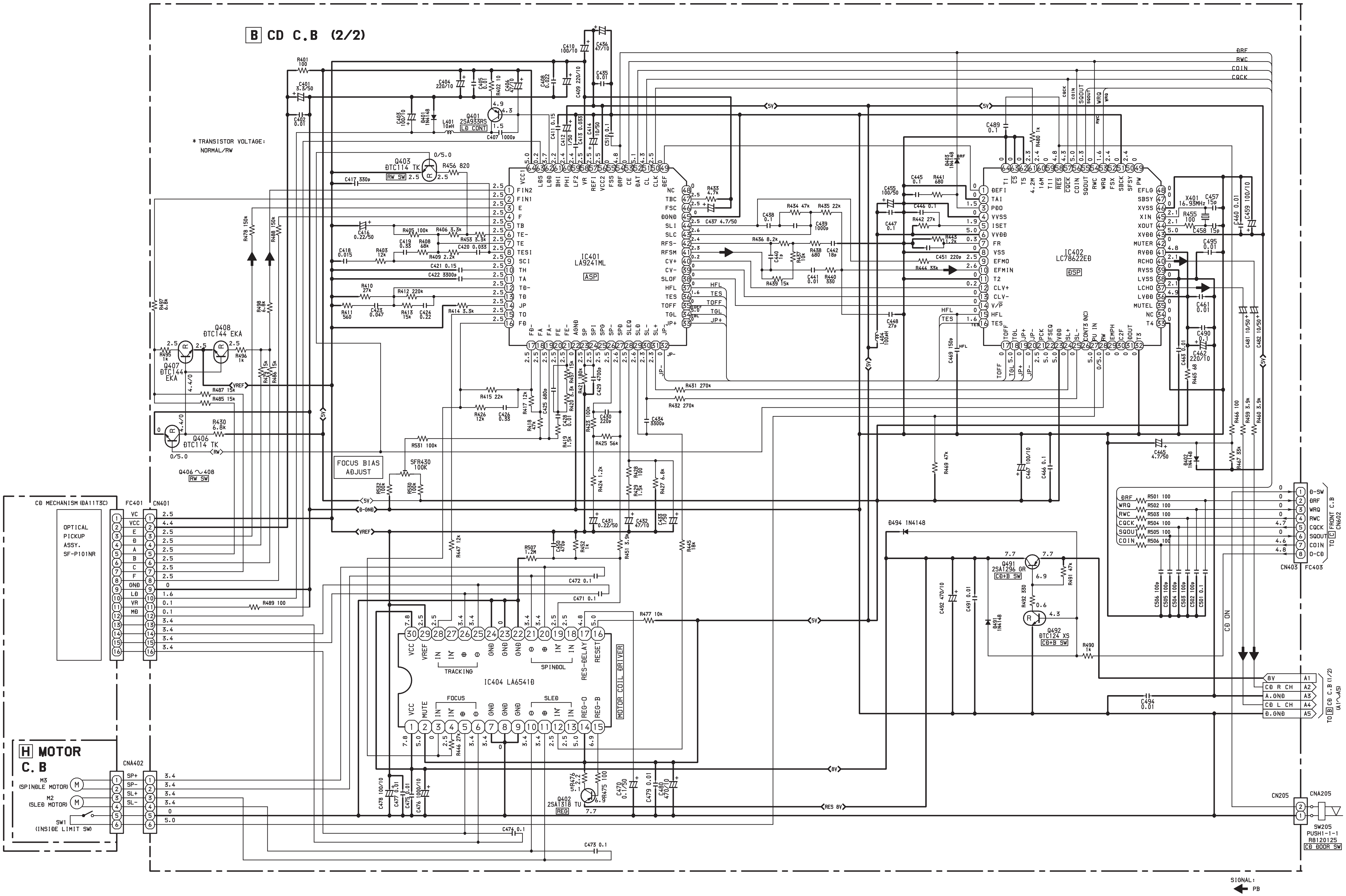

B CD C.B
A MAIN C.B
TO C FRONT C.B CN602
FC403
TO CN403
SW205
CD DOOR SW
CNA205
TO CN205
TO G BATT1 C.B
CNA901
TO CN301
TO E HP C.B
CN101
TO CN202
TAPE MECHANISM TN-21ZVC-2000
M1 (TAPE MOTOR)
S1 (TAPE SW)
TO CN802
CNA402
TO H MOTOR C.B
(CD MECHANISM DA11TC3)
TO CN401
FC401
TO CD MECHANISM DA11TC3
SW801
PB
REC
TAPE MECHANISM TN-21ZVC2000
RPH
EH
CNA801
TO CN801
TO D TUNER C.B CN002
CNA302
TO CN201
FC201
TO C FRONT C.B CN601
IC202
IC402
IC401
IC404
IC203
IC801

SCHEMATIC DIAGRAM-1 (MAIN)

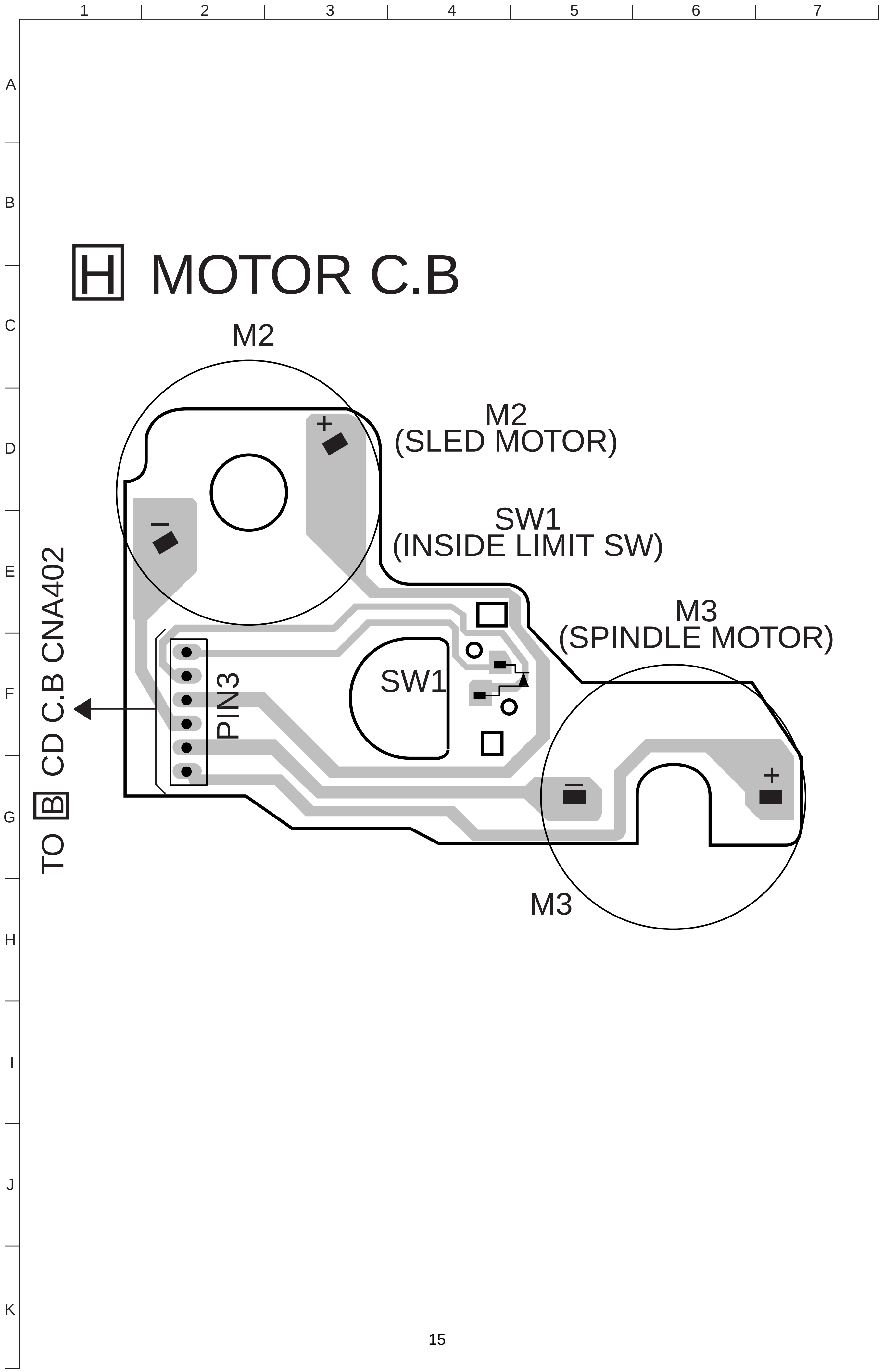


*	U	EZ	K
C239	0.01	0.01	1
C240	0.01	0.01	1
IC203	M61509FP	M61509FP	M62495AFP
R205	NM	NM	1.2K
R206	NM	NM	1.2K
R203	NM	NM	4.7K
R204	NM	NM	4.7K
Q251	NM	2SA933SRS	2SA933SRS
R281	NM	1K	1K
R282	NM	470	470
D032	HZ7A3L	HZ7A1L	HZ7A1L
D323	NM	1N4148	1N4148
R323	NM	100	100
R324	NM	100	100

* *	U	EZ	K
PR901	JW	2.5A 491SERIES 60	2.5A 491SERIES 60
PT901	PT, U 2.5W	PT, E	PT, E

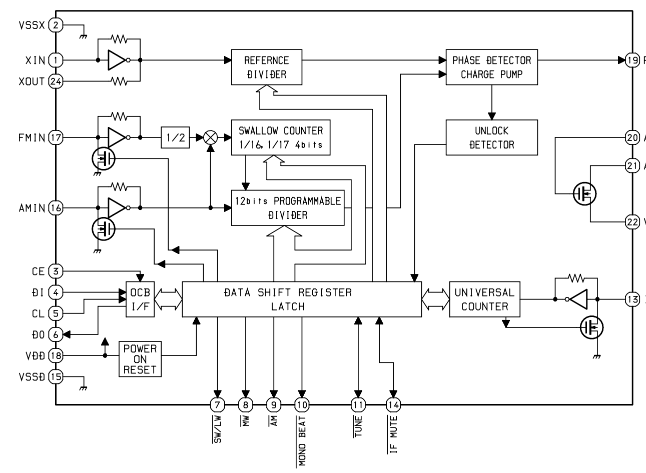

B CD C.B (2/2)
IC401 LA9241ML
IC402 LC78622ED
IC404 LA6541D
FOCUS BIAS ADJUST
CD MECHANISM (DA11T3C)
OPTICAL PICKUP ASSY. SF-P101NR
H MOTOR C.B
M3 (SPINDLE MOTOR)
M2 (SLED MOTOR)
SW1 (INSIDE LIMIT SW)
MOTOR COIL DRIVER
TO C FRONT C.B CN602
TO B CD C.B (1/2) (A1~A5)
SW205 PUSH1-1-1 R8120125 CD DOOR SW
* TRANSISTOR VOLTAGE: NORMAL/RW
SIGNAL: PB

WIRING-2 (MOTOR)

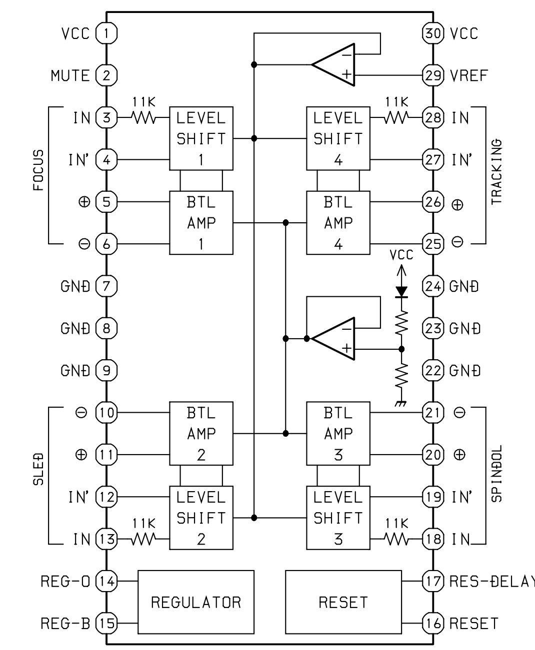


IC BLOCK DIAGRAM

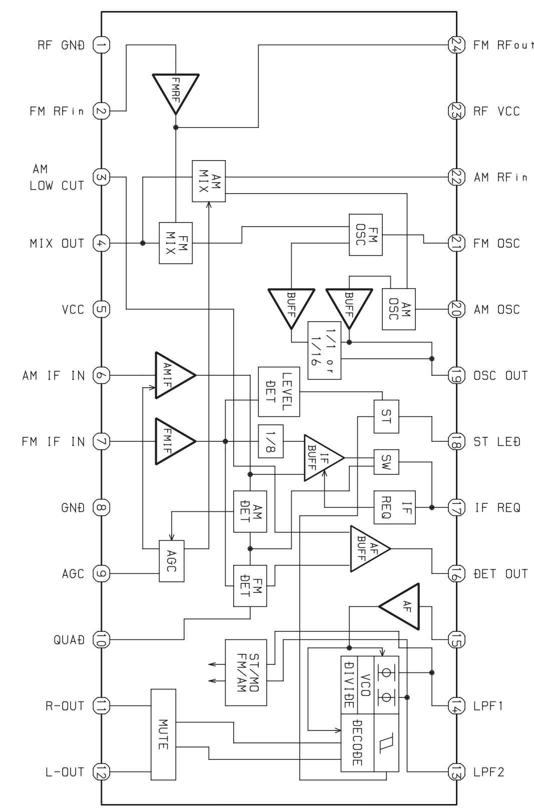
IC, LC7212M



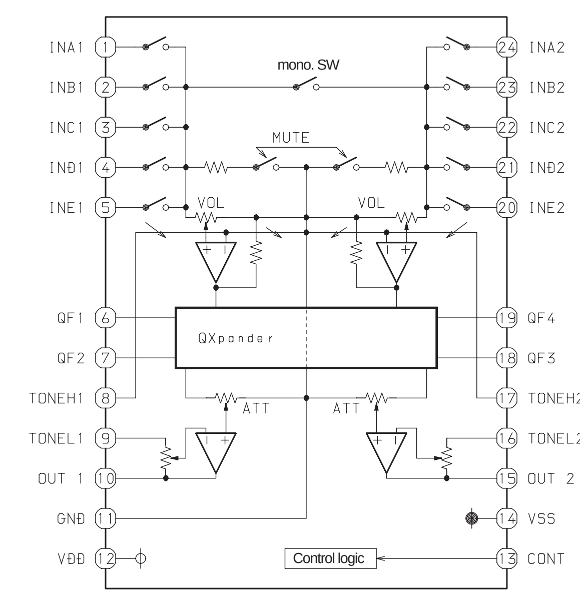
IC, LA6541D



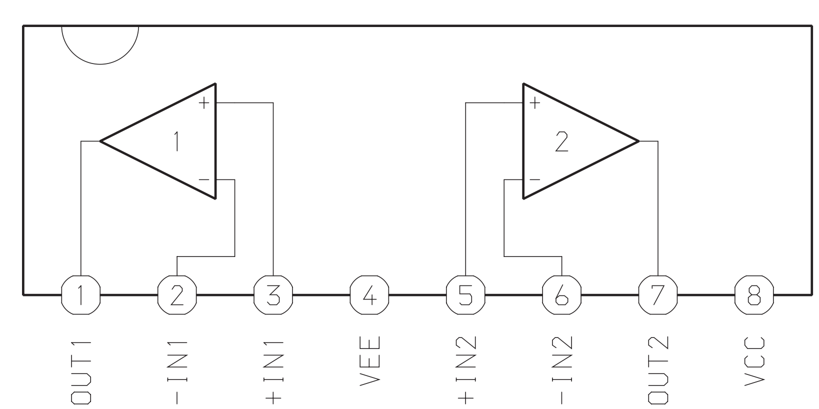
IC, TA2149N

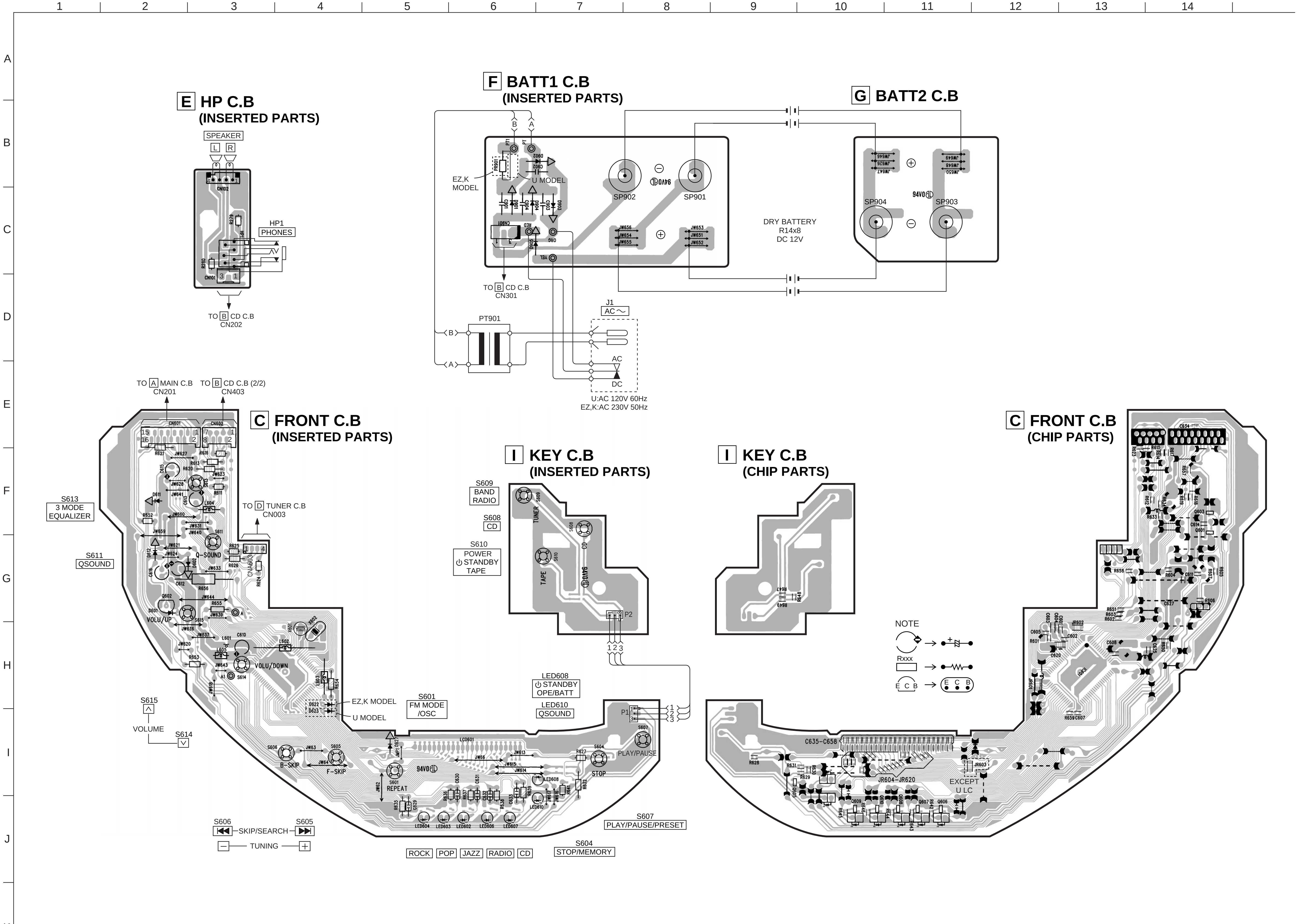


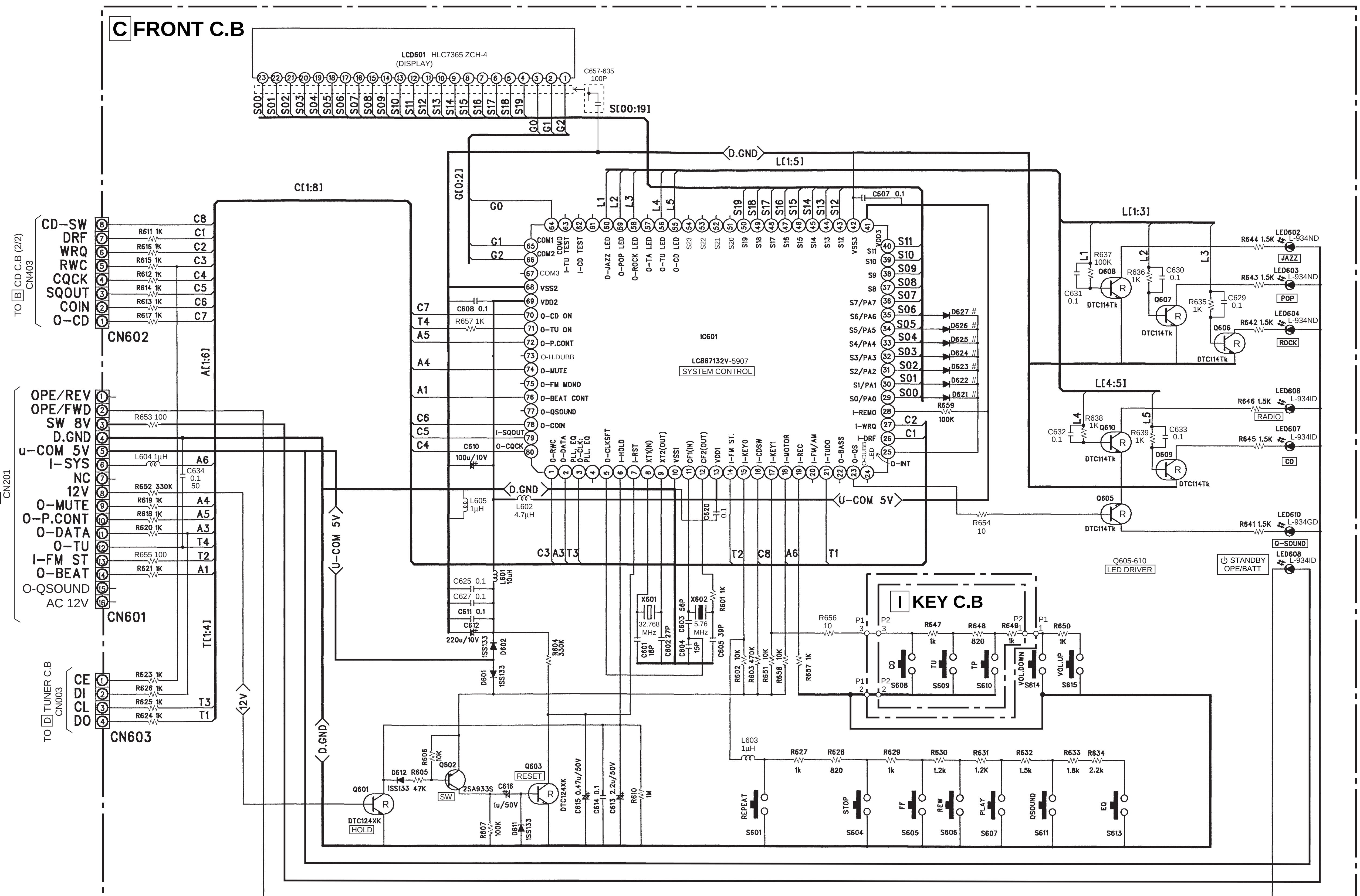
IC, M61509FP



IC, BA4560N



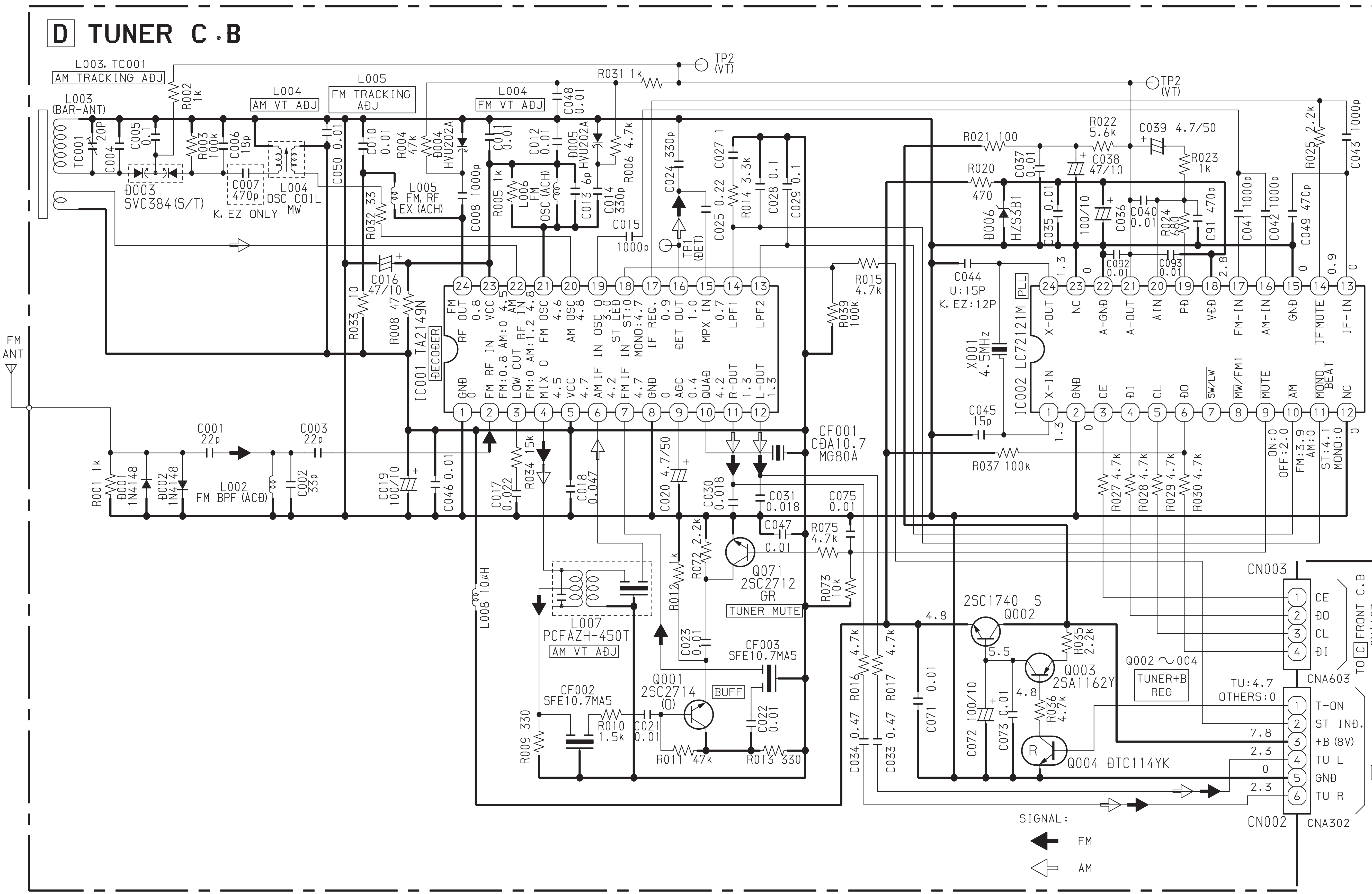

E HP C.B
(INSERTED PARTS)
SPEAKER
L R
HP1
PHONES
TO B CD C.B
CN202
F BATT1 C.B
(INSERTED PARTS)
EZ,K
MODEL
U MODEL
SP902
SP901
TO B CD C.B
CN301
G BATT2 C.B
SP904
SP903
DRY BATTERY
R14x8
DC 12V
PT901
J1
AC
AC
DC
U:AC 120V 60Hz
EZ,K:AC 230V 50Hz
TO A MAIN C.B
CN201
TO B CD C.B (2/2)
CN403
C FRONT C.B
(INSERTED PARTS)
S613
3 MODE
EQUALIZER
TO D TUNER C.B
CN003
S611
QSOUND
I KEY C.B
(INSERTED PARTS)
S609
BAND
RADIO
S608
CD
S610
POWER
STANDBY
TAPE
I KEY C.B
(CHIP PARTS)
C FRONT C.B
(CHIP PARTS)
NOTE
Rxxx
S615
VOLUME
S614
EZ,K MODEL
U MODEL
S601
FM MODE
/OSC
LED608
STANDBY
OPE/BATT
LED610
QSOUND
EXCEPT
U LC
S606
S605
SKIP/SEARCH
TUNING
S607
PLAY/PAUSE/PRESET
ROCK
POP
JAZZ
RADIO
CD
S604
STOP/MEMORY

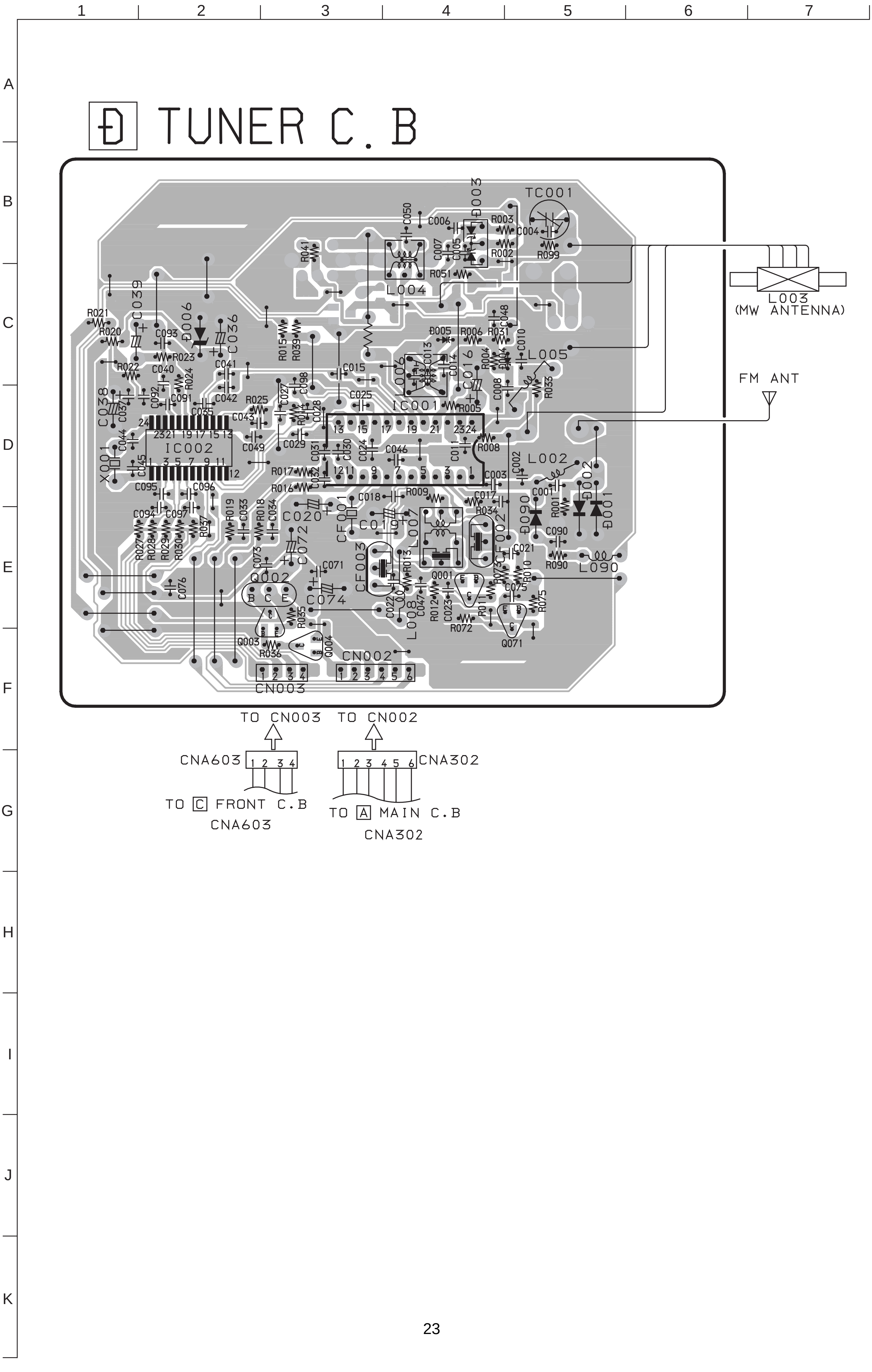


** KEY NAME **

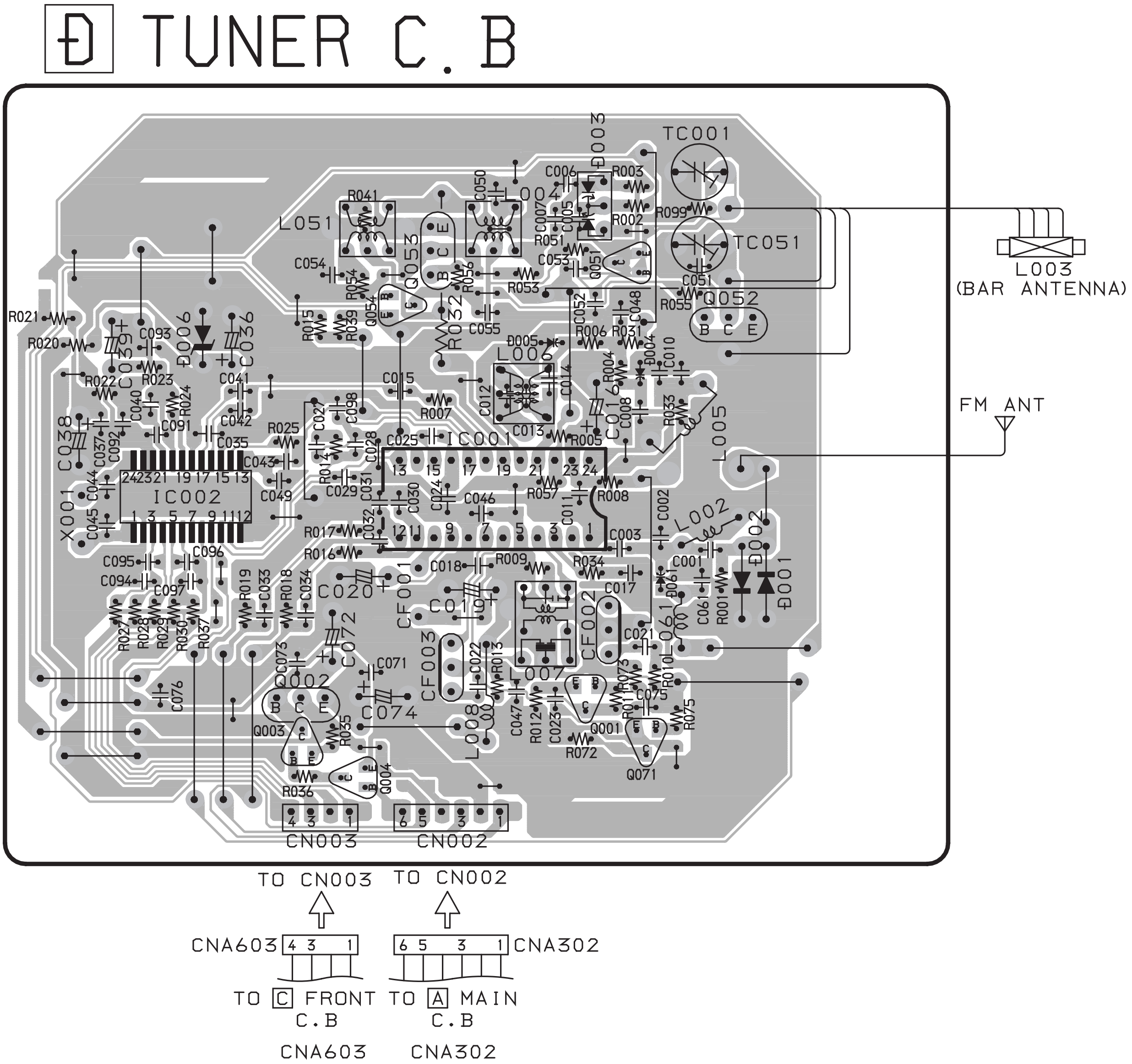
S601	FM MODE/OSC	S610	TAPE,STANBY
S604	STOP/MEMORY	S611	Q-SOUND
S605	▶▶I SKIP,SEARCH/UP	S612	T-BASS
S606	I◀◀ SKIP,SEARCH/DOWN	S613	3 MODE EQUALIZER
S607	PLAY/PAUSE/PRESET	S614	VOLUME ∨
S608	CD	S615	VOLUME ∧
S609	TUNER/BAND		

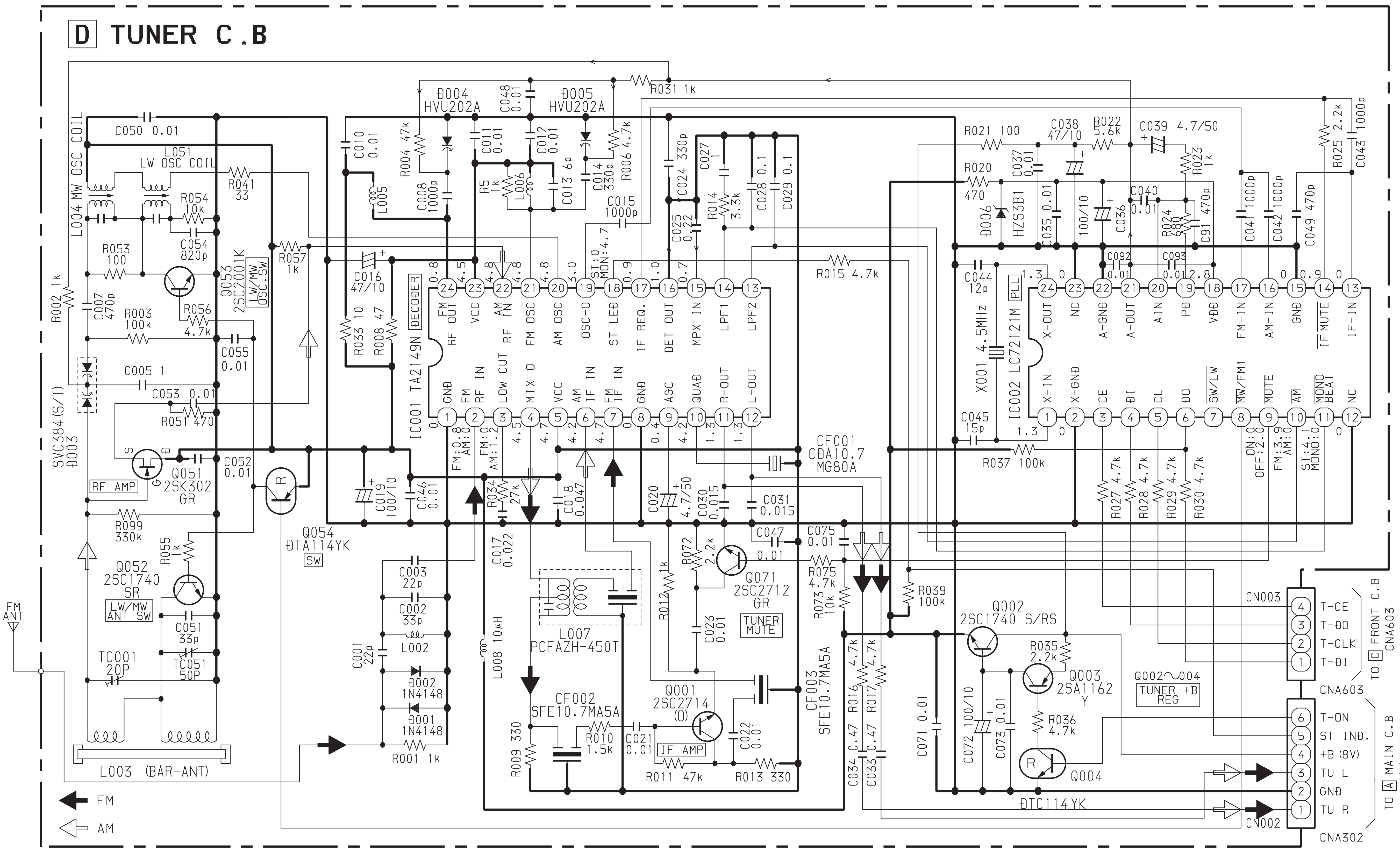
#	TU EZ K	TU U LH
D621:SW1	X	X
D622:LW	1SS133	X
D623:MW,10K	X	1SS133
D624:FM WIDE	X	X
D625:OIRT	X	X
D626:SW2	X	X
D627:SYN	1SS133	1SS133


D TUNER C.B
IC001 TA2149N
IC002 LC72121M
Q001 2SC2714
Q002 2SC1740 S
Q003 2SA1162Y
Q004 DTC114YK
Q071 2SC2712 GR
TUNER MUTE
BUFF
TUNER+B REG
CF001 CDA10.7 MG80A
CF002 SFE10.7MA5
CF003 SFE10.7MA5
L007 PCFAZH-450T
AM VT ADJ
AM TRACKING ADJ
FM TRACKING ADJ
FM VT ADJ
FM ANT
CN003
CN002
CE
DO
CL
DI
T-ON
ST IND.
+B (8V)
TU L
GND
TU R
TO C FRONT C.B CNA603
TO A MAIN C.B CNA302
SIGNAL:
FM
AM

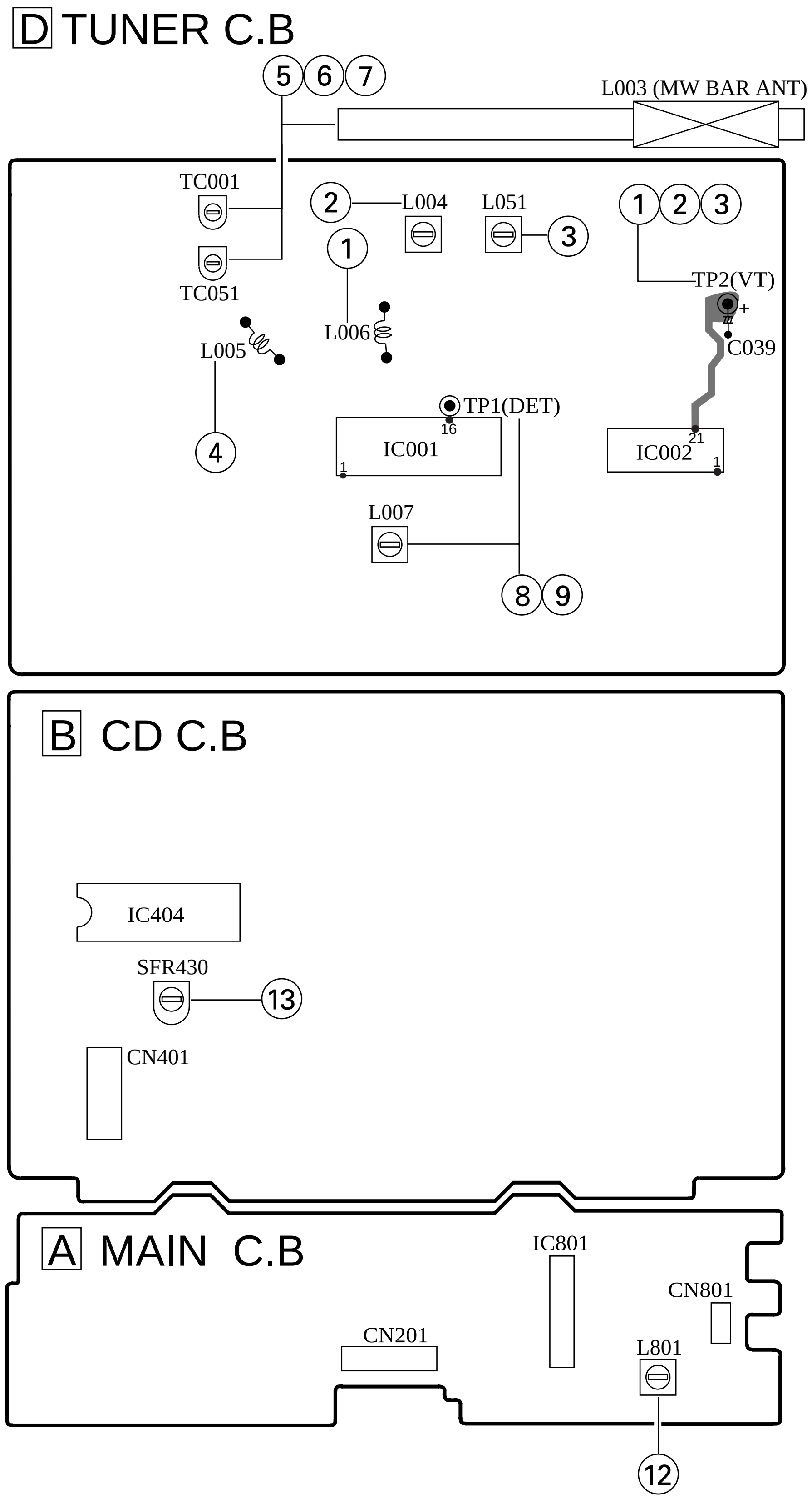

D TUNER C.B
L003 (MW ANTENNA)
FM ANT
TO CN003
TO CN002
CNA603
CNA302
TO C FRONT C.B CNA603
TO A MAIN C.B CNA302

WIRING-5 (TUNER: EZ, K)

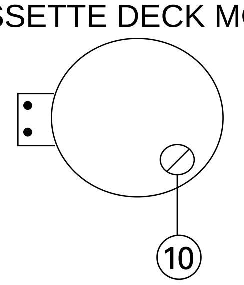




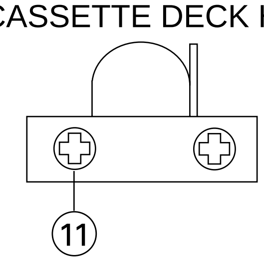
D TUNER C.B
D004 HVU202A
D005 HVU202A
C048 0.01
R031 1k
C050 0.01
L004 MW OSC COIL
L051 LW OSC COIL
R041 33
R054 10k
C054 820p
R053 100
Q053 2SC2001K
LW/MW OSC.SW
R057 1k
R002 1k
C007 470p
R003 100k
R056 4.7k
C055 0.01
C005 1
C053 0.01
R051 470
SVC384(S/T) D003
Q051 2SK302 GR
RF AMP
C052 0.01
Q054 DTA114YK
SW
R099 330k
R055 1k
Q052 2SC1740 SR
LW/MW ANT SW
C051 33p
TC001 20P
TC051 50P
FM ANT
L003 (BAR-ANT)
FM
AM
C010 0.01
R004 47k
C011 0.01
C012 0.01
C008 1000p
L005
R5 1k
L006
C013 6p
C014 330p
R006 4.7k
C015 1000p
C024 330p
C027 1
C028 0.1
C029 0.1
C025 0.22
R014 3.3k
C016 47/10
R015 4.7k
R033 10
R008 47
DECODER
IC001 TA2149N
FM RF OUT
VCC
AM RF IN
FM OSC
AM OSC
OSC-O
ST LED
IF REQ.
DET OUT
MPX IN
LPF1
LPF2
GND
FM RF IN
LOW CUT
MIX O
AM IF IN
FM IF IN
AGC
QUAD
R-OUT
L-OUT
ST:0 MON:4.7
FM:0.8 AM:0
FM:0 AM:1.2
CF001 CDA10.7 MG80A
C019 100/10
C046 0.01
R034 27k
C018 0.047
C017 0.022
C020 4.7/50
C030 0.015
C031 0.015
C047 0.01
C075 0.01
R075 4.7k
R072 2.2k
Q071 2SC2712 GR
TUNER MUTE
R073 10k
R012 1k
C023 0.01
C003 22p
C002 33p
L002
C001 22p
D002 1N4148
D001 1N4148
R001 1k
L008 10μH
L007 PCFAZH-450T
CF002 SFE10.7MA5A
R009 330
R010 1.5k
C021 0.01
Q001 2SC2714 (O)
IF AMP
R011 47k
C022 0.01
R013 330
CF003 SFE10.7MA5A
R016 4.7k
R017 4.7k
C034 0.47
C033 0.47
R021 100
C038 47/10
R022 5.6k
C039 4.7/50
R025 2.2k
C043 1000p
R020 470
C037 0.01
R023 1k
D006 HZS3B1
C035 0.01
100/10
C036
C040 0.01
R024 680
C91 470p
C041 1000p
C042 1000p
C049 470p
C092 0.01
C093 0.01
C044 12p
PLL
X001 4.5MHz
IC002 LC72121M
X-OUT
NC
A-GND
A-OUT
AIN
PD
VDD
FM-IN
AM-IN
GND
IF MUTE
IF-IN
X-IN
X-GND
CE
DI
CL
DO
SW/LW
MW/FM1
MUTE
AM
MONO BEAT
C045 15p
R037 100k
ON:0 OFF:2.0
FM:3.9 AM:0
ST:4.1 MONO:0
R027 4.7k
R028 4.7k
R029 4.7k
R030 4.7k
R039 100k
Q002 2SC1740 S/RS
R035 2.2k
Q003 2SA1162 Y
Q002~004 TUNER +B REG
R036 4.7k
Q004 DTC114YK
C071 0.01
C072 100/10
C073 0.01
CN003
T-CE
T-DO
T-CLK
T-DI
TO C FRONT C.B CNA603
CNA603
T-ON
ST IND.
+B (8V)
TU L
GND
TU R
CN002
TO A MAIN C.B CNA302
CNA302

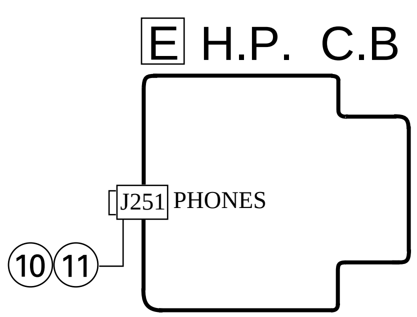


CASSETTE DECK MOTOR



CASSETTE DECK HEAD





< TUNER SECTION >

1. FM VT Adjustment
   Settings : • Test point : TP2 (VT)
   • Adjustment location : L006
   Method : Set to FM 108.0MHz and adjust L006 so that the test point voltage becomes 6.0V ± 0.05V.

2. MW VT Adjustment
   Settings : • Test point : TP2 (VT)
   • Adjustment location : L004
   Method : Set to MW 1000kHz (U), MW 999kHz (EZ,K) and adjust L004 so that the test point voltage becomes 3.75V ± 0.05V.

3. LW VT Adjustment <EZ,K>
   Settings : • Test point : TP2 (VT)
   • Adjustment location : L051
   Method : Set to LW 288kHz and adjust L051 so that the test point voltage becomes 4.5V ± 0.05V.

4. FM Tracking Adjustment
   L005..98.0MHz

5. MW Tracking Adjustment <U>
   L003..600kHz
   TC001..1400kHz

6. MW Tracking Adjustment <EZ,K>
   L003..603kHz
   TC001..1404kHz

7. LW Tracking Adjustment <EZ,K>
   L003..153kHz
   TC051..288kHz

8. AM IF Adjustment <U>
   Settings : • Test point : TP1(DET)
   • Adjustment location : L007
   Method : Adjust L007 so that the output level at 1400kHz becomes maximum.

9. AM IF Adjustment <EZ,K>
   Settings : • Test point : TP1 (DET)
   • Adjustment location : L007
   Method : Adjust L007 so that the output level at 1404kHz becomes maximum.

< DECK SECTION >

10. Tape Speed Adjustment
    Settings : • Test tape : TTA–100
    • Test point : J251 (PHONES jack)
    • Adjustment location : SFR of deck motor
    Method : Play back the test tape and adjust SFR so that the frequency counter reads 3000Hz ± 30Hz.

11. Head Azimuth Adjustment
    Settings : • Test tape : TTA–320
    • Test point : J251 (PHONES jack)
    • Adjustment location : Azimuth adjustment screw
    Method : Play back the 8kHz signal of the test tape and adjust screw so that the output becomes maximum.

12. Bias frequncy Adjustment
    L801...85kHz±0.5kHz

< CD SECTION >

13. FE Balance Adjustment
    Settings : • Test point : IC401 PIN58 (VR), IC401 PIN 20 (FE)
    • Adjustment location : SFR430
    Method : Playback the disc and adjust SFR430 so that the test point voltage becomes 0V.

PRACTICAL SERVICE FIGURE

< TUNER SECTION >

< FM SECTION >

Sensitivity: (THD 3%)	Less than 18dB (87.5MHz) Less than 18dB (98.0MHz) Less than 18dB (108.0MHz)
Signal to Noise Ratio: (Input 60dB)	More than 66dB (at 98.0MHz) (EXCEPT U) More than 58dB (at 98.0MHz) (U)
Distortion: (Input 60dB)	Less than 3% (at 98.0MHz)
Intermediate frequency:	10.7MHz
Stereo separation:	More than 20dB

< AM SECTION >

Sensitivity: (S/N 10dB)	Less than 48dB (at 600kHz) Less than 46dB (at 1000kHz) Less than 44dB (at 1400kHz)
Distortion: (Input 74dB)	Less than 3%
Intermediate frequency:	450kHz

< LW SECTION >

Sensitivity: (S/N 10dB)	Less than 60dB (at 153kHz) Less than 56dB (at 198kHz) Less than 52dB (at 288kHz)
Distortion: (Input 80dB)	Less than 3%
Intermediate frequency:	450kHz

< CASSETTE SECTION >

Tape speed:	3000Hz±60Hz
Wow & flutter:	Less than 0.3% (JIS RMS)
Take-up torque:	30-60g-cm (FWD)
FF torque:	55-140g-cm
Rew torque:	55-140g-cm
S/N ratio:	More than 35dB
Distortion:	Less than 3.0% (PB)
Noise (PB):	Less than 1mV (AC/DC, MIN)
Erasing Ratio (W/FILTER):	More than 45dB

IC DESCRIPTION
IC, LA9241ML

Pin No.	Pin Name	I/O	Description
1	FIN2	I	Pin to which external pickup photo diode is connected. RF signal is created by adding with the FIN1 pin signal. FE signal is created by subtracting from the FIN1 pin signal.
2	FIN1	I	Pin to which external pickup photo diode is connected.
3	E	I	Pin to which external pickup photo diode is connected. TE signal is created by subtracting from the F pin signal.
4	F	I	Pin to which external pickup photo diode is connected.
5	TB	I	DC component of the TE signal is input.
6	TE-	I	Pin to which external resistor setting the TE signal gain is connected between the TE pin.
7	TE	O	TE signal output pin.
8	TESI	I	TES “Track Error Sense” comparator input pin. TE signal is passed through a band-pass filter then input.
9	SCI	I	Shock detection signal input pin.
10	TH	I	Tracking gain time constant setting pin.
11	TA	O	TA amplifier output pin.
12	TD-	I	Pin to which external tracking phase compensation constants are connected between the TD and VR pins.
13	TD	I	Tracking phase compensation setting pin.
14	JP	I	Tracking jump signal (kick pulse) amplitude setting pin.
15	TO	O	Tracking control signal output pin.
16	FD	O	Focusing control signal output pin.
17	FD-	I	Pin to which external focusing phase compensation constants are connected between the FD and FA pins.
18	FA	I	Pin to which external focusing phase compensation constants are connected between the FD– and FA– pins.
19	FA-	I	Pin to which external focusing phase compensation constants are connected between the FA and FE pins.
20	FE	O	FE signal output pin.
21	FE-	I	Pin to which external FE signal gain setting resistor is connected between the FE pin.
22	AGND	—	Analog signal GND.
23	SP	O	Signal ended output of the CV+and CV- pin input signal.
24	SPI	I	Spndle amp input.
25	SPG	I	Pin to which external spindle gain setting resistor in 12 cm mode is connected.
26	SP-	I	Pin to which external spindle phase compensation constants are connected together with SPD pin.
27	SPD	O	Spindle control signal output pin.
28	SLEQ	I	Pin to which external sled phase compensation constants are connected.
29	SLD	O	Sled control signal output pin.
30, 31	SL-, SL+	I	Sled advance signal input pin from microprocessor.
32, 33	JP-, JP+	I	Tracking jump signal input pin from DSP.
34	TGL	I	Tracking gain control signal input from DSP. Low gain when TGL = H.
35	TOFF	I	Tracking off control signal input pin from DSP. Off when TOFF = H.

Pin No.	Pin Name	I/O	Description
36	TES	O	Pin from which TES signal is output to DSP.
37	HFL	O	“High Frequency Level” is used to judge whether the main beam position is on top of bit or on top of mirror.
38	SLOF	I	Sled servo off control input pin.
39, 40	CV–, CV+	I	CLV error signal input pin from DSP.
41	RFSM	O	RF output pin.
42	RFS-	I	RF gain setting and EFM signal 3T compensation constant setting pin together with RFSM pin.
43	SLC	O	“Slice Level Control” is the output pin which controls the RF signal data slice level by DSP.
44	SLI	I	Input pin which control the data slice level by the DSP.
45	DGND	—	Digital system GND.
46	FSC	O	Output pin to which external focus search smoothing capacitor is connected.
47	TBC	I	“Tracking Balance Control” EF balance variable range setting pin.
48	NC	—	No connection.
49	DEF	O	Disc defect detector output pin.
50	CLK	I	Reference clock input pin. 4.23 MHz of the DSP is input.
51	CL	I	Microprocessor command clock input pin.
52	DAT	I	Microprocessor command data input pin.
53	CE	I	Microprocessor command chip enable input pin.
54	DRF	O	“Detect RF” RF level detector output.
55	FSS	I	“Focus Search Select” focus search mode (± search/+ search) select pin.
56	VCC2	—	Servo system and digital system Vcc pin.
57	REFI	—	Pin to which external bypass capacitor for reference voltage is connected.
58	VR	O	Reference voltage output pin.
59	LF2	I	Disc defect detector time constant setting pin.
60	PH1	I	Pin to which external capacitor for RF signal peak holding is connected.
61	BH1	I	Pin to which external capacitor for RF signal bottom holding is connected.
62	LDD	O	APC circuit output pin.
63	LDS	I	APC circuit input pin.
64	VCC1	—	RF system Vcc pin.

IC, LC78622ED

Pin No.	Pin Name	I/O	Description	
1	DEFI	I	Defect sense signal (DEF) input pin. (Connect to 0V when not used).	
2	TAI	I	For PLL.	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.
3	PDO	O		Phase comparator output pin to control external VCO.
4	VVSS	—		GND pin for built-in VCO. Be sure to connect to 0V.
5	ISET	I		Pin to which external resistor adjusting the PD0 output current.
6	VVDD	—		Power supply pin for built-in VCO.
7	FR	I		Pin for VCO frequency range adjustment.
8	VSS	—	Digital system GND. Be sure to connect to 0V.	
9	EFMO	O	For slice level control.	EFM signal output pin.
10	EFMIN	I		EFM signal input pin.
11	T2	I	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.	
12, 13	CLV+, CLK-	O	Disc motor control output. Three level output is possible using command.	
14	V/$\overline{P}$	O	Rough servo or phase control automatic selection monitoring output pin. Rough servo at H. Phase servo at L.	
15	HFL	I	Track detect signal input pin. Schmidt input.	
16	TES	I	Tracking error signal input pin. Schmidt input.	
17	TOFF	O	Tracking OFF output pin.	
18	TGL	O	Tracking gain selection output pin. Gain boost at L.	
19, 20	JP+, JP-	O	Track jump control signal output pin. Three level output is possible using command.	
21	PCK	O	EFM data playback clock monitoring pin 4.3218 MHz when phase is locked in.	
22	FSEQ	O	Sync signal detection output pin. H when the sync signal which is detected from EFM signal and thesync signal which is internally generated agree.	
23	VDD	—	Digital system power supply pin.	
24	SL+	O	Moves the sled to outer circumference.	
25	SL-	O	Moves the sled to inner circumference.	
26	CONT3 (NC)	—	Not connected.	
27	PUIN	I	CD pickup inner switch detection.	
28	$\overline{RW}$	O	Read, wright signal.	
29	EMPH	O	De-emphasis monitor output pin. De-emphasis disc is being played back at H.	
30	C2F	O	C2 flag output pin.	
31	DOUT	O	DIGITAL OUT output pin. (EIAJ format).	
32, 33	T3, T4	I	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.	
34	N.C.	—	Not used. Set the pin to open.	
35	MUTEL	O	L-channel 1-bit DAC.	L-channel mute output pin.
36	LVDD	—		L-channel power supply pin.
37	LCHO	O		L-channel output pin.
38	LVSS	—		L-channel GND. Be sure to connect to 0V.
39	RVSS	—	R-channel 1-bit DAC.	R-channel GND. Be sure to connect to 0V.
40	RCHO	O		R-channel output pin.
41	RVDD	—		R-channel power supply pin.
42	MUTER	O		R-channel mute output pin.

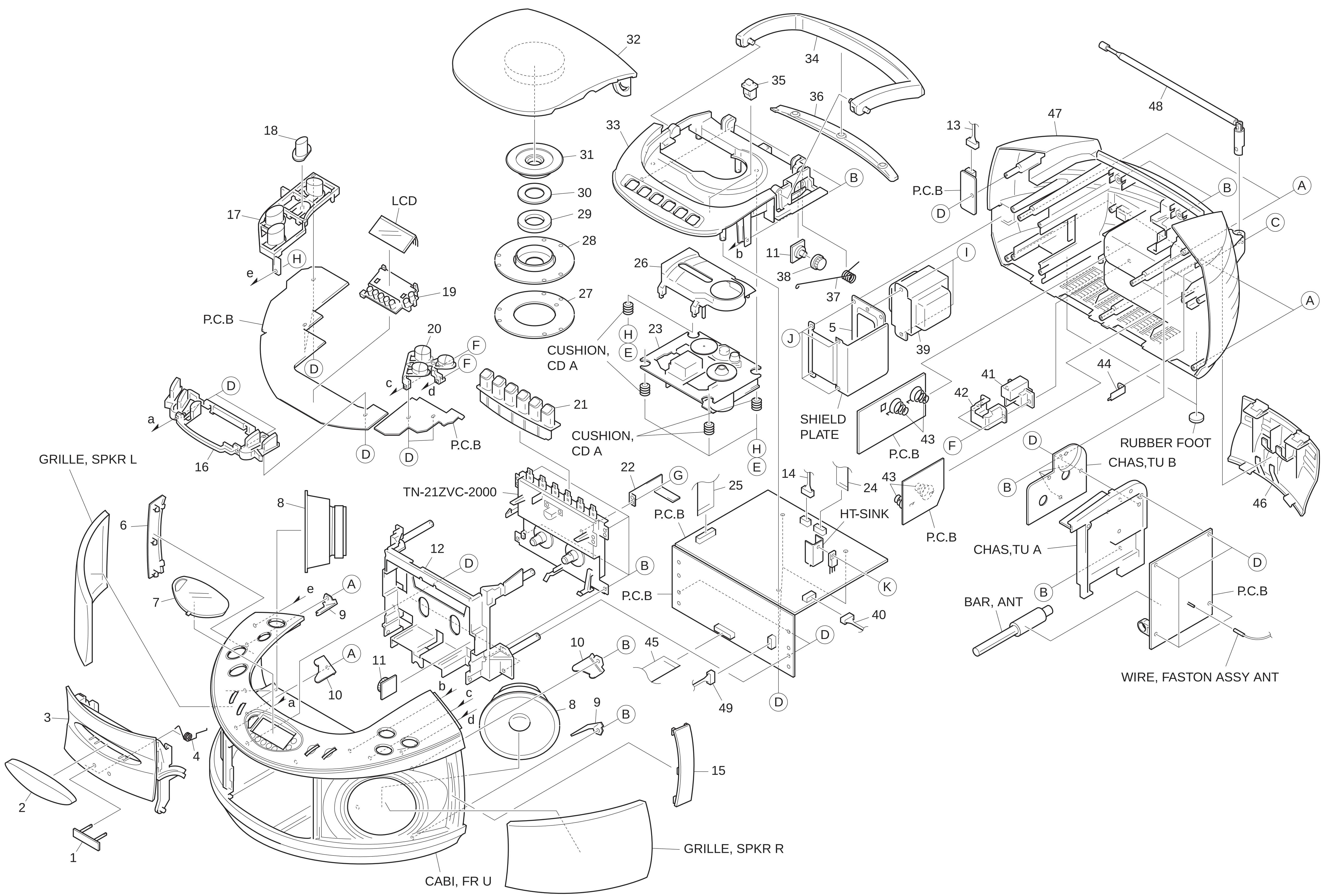
Pin No.	Pin Name	I/O	Description
43	XVDD	—	Crystal oscillator power supply pin.
44	XOUT	O	Pin to which external 16.9344 MHz crystal oscillator is connected.
45	XIN	I	
46	XVSS	—	Crystal oscillator GND pin. Be sure to connect to 0V.
47	SBSY	O	Subcode block sync signal output pin.
48	EFLG	O	C1, C2, single and dual correction monitoring pin.
49	PW	O	Subcode P, Q, R, S, T, U and W output pin.
50	SFSY	O	Subcode frame sync signal output pin. Falls down when subcode enters standby.
51	SBCK	I	Subcode read clock input pin. Schmidt input. (Be sure to connected to 0V when not in use.)
52	FSX	O	Pin outputting the 7.35 kHz sync signal which is generated by dividing frequency of crystal oscillator.
53	WRQ	O	Subcode Q output standby output pin.
54	RWC	I	Read/write control input pin. Schmidt input.
55	SQOUT	O	Subcode Q output pin.
56	COIN	I	Command input pin from microprocessor.
57	$\overline{\text{CQCK}}$	I	Command input read clock or subcode read input clock from SQOUT pin
58	RES	I	LC78622 reset input pin. Set this pin to L once when the main power is turned on.
59	T11	O	Test signal output pin. Use this pin as open (normally L output).
60	16M	O	16.9344 MHz output pin.
61	4.2M	O	4.2336 MHz output pin.
62	T5	I	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.
63	$\overline{\text{CS}}$	I	Chip select signal input pin with built-in pull-down resistor. Be sure to connect to 0V while it is not controlling.
64	T1	I	Test signal input pin without built-in pull-down resistor. Be sure to connect to 0V.

IC, LC867132V-5P07

Pin No.	Pin Name	I/O	Description
1	O-RMC/CE	O	CD read/write control output and TU CE.
2	O-DATA	O	Data output to M62495FP.
3	O-CLK	O	Output CLK to tuner PLL.(Not connected)
4	—	—	Not Connected.
5	O-CLK SFT	O	Clock shift output of the microcomputer.
6	I-HOLD	I	Hold status detection.
7	RST	I	Microcomputer reset.
8	XT1 (IN)	I	Connected to 32.768KHZ crystal oscillator.
9	XT2 (OUT)	O	
10	VSS1	—	GND.
11	CF1 (IN)	I	Connected to 6MHZ Ceramic Filter.
12	CF2 (OUT)	O	
13	VDD1	—	Power supply for microcomputer (+5V).
14	I-ST IND	I	FM STEREO status input.
15	I-KEYO	I	KEY AD input.
16	I-CD SW	I	CD DOOR SW status detection input.
17	I-KEY1	I	KEY AD input.
18	I-MOTOR	I	DECK MECHA MOTOR status input.
19	I-REC	I	REC status input.
20	I-FM/AM	I	FM, AM status input. (Not connected)
21	I-TU DO	I	Data input from tuner PLL.(Not connected)
22	O-BASS LED	O	BASS LED ON/OFF control output.
23	O-QS LED	O	Q-Sound LED ON/OFF control output.
24	O-DUBB LED	O	LED control output used for high-speed dubbing.
25	O-INT	O	INT DIODE MATRIX detection output.(Not connected)
26	I-DRF	I	CD RF level detection input.
27	I-WRQ	I	CD sub-code Q standby input.
28	I-REMO	I	Remote control input.
29	S0/PA0	O	LCD segment output.
30	S1/PA1	O	LCD segment output.
31	S2/PA2	O	LCD segment output.
32	S3/PA3	O	LCD segment output.
33	S4/PA4	O	LCD segment output.
34	S5/PA5	O	LCD segment output.
35	S6/PA6	O	LCD segment output.
36	S7/PA7	O	LCD segment output.
37-40	S8~S11	O	
41	VDD3	—	Power supply for microcomputer (+5V).
42	VSS3	—	GND.
43, 44	S12, S13	O	LCD segment output.
45-50	S14- S19	O	LCD segment output.

Pin No.	Pin Name	I/O	Description
51-54	S20- S23	—	Not connected.
55	O-CD LED	O	LED ON/OFF control output for CD functions.
56	O-TU LED	O	LED ON/OFF control output for TU functions.
57	O-TA LED	O	LED ON/OFF control output for TAPE functions. (Not Connected)
58	O-ROCK LED	O	LED ON/OFF control output for ROCK.
59	O-POP LED	O	LED ON/OFF control output for POP.
60	O-JAZZ LED	O	LED ON/OFF control output for JAZZ.
61	—	—	Not connected.
62	I-CD TEST	—	Not connected.
63	I-TU TEST	—	Not connected.
64-66	COM0-COM2	O	LCD common output.
67	—	—	Not connected.
68	VSS2	—	GND.
69	VDD2	—	Power supply for microcomputer (+5V).
70	O-CD ON	O	CD PWR control output.
71	O-TU ON	O	TU PWR control output.
72	O-P.CONT	O	Power supply control output.
73	$\overline{\text{O-H.DUBB}}$	O	Dubbing speed control output.
74	O-MUTE	O	Main mute output.
75	O-MO/ST	O	FM mono/stereo output.
76	O-BEAT CONT	O	BEAT switch over output.
77	O-QSOUND	O	Q-Sound ON/OFF output.
78	O-COIN	O	CD command output.
79	I-SQOUT	I	CD sub-code Q input.
80	O-CQCK	O	CLK for CD commands/sub-codes.

MECHANICAL EXPLODED VIEW 1/1



MECHANICAL PARTS LIST 1/1

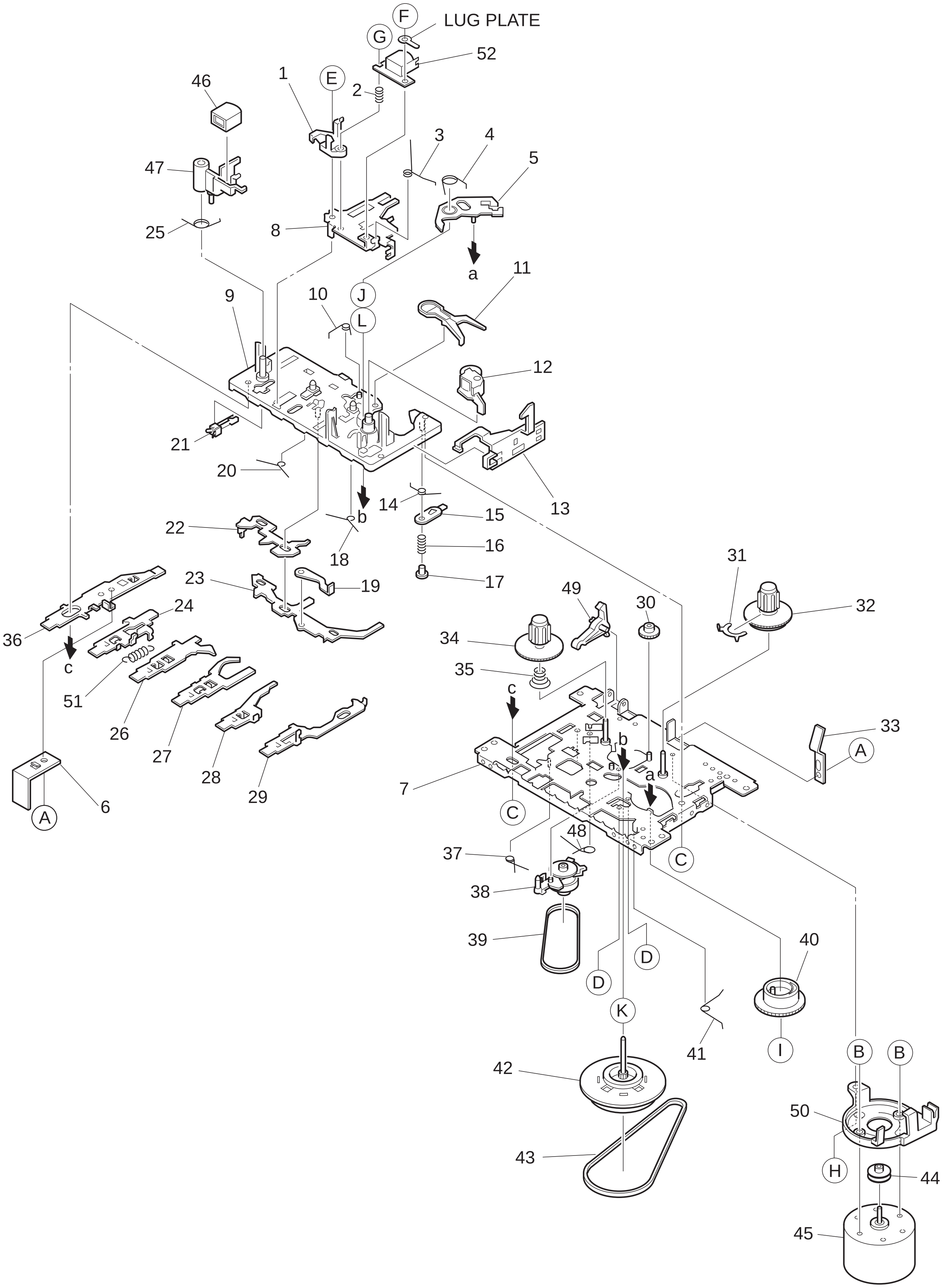
DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-CL7-107-010		BADGE,AIWA SILVER
2	8A-CD8-007-010		WINDOW,CASS<EXCEPT 53 U<L>,52 U<W>>
2	8A-CH8-040-010		WINDOW,CASS (L)<53 U<L>>
2	8A-CH8-021-010		WINDOW,CASS (W)<52 U<W>>
3	8A-CD8-006-010		BOX,CASS<EXCEPT 53 U<L>,52 U<W>>
3	8A-CH8-039-010		BOX,CASS (L)<53 U<L>>
3	8A-CH8-020-010		BOX,CASS (W)<52 U<W>>
4	8A-CD8-207-010		SPR-T,CASS
5	8A-CD8-209-010		HLDR,TRANS
6	8A-CD8-018-010		PANEL,FR L<EXCEPT 53 U<L>,52 U<W>>
6	8A-CH8-048-010		PANEL,FR L (L)<53 U<L>>
6	8A-CH8-029-010		PANEL,FR L (W)<52 U<W>>
7	8A-CH8-014-010		WINDOW,LCD EX<51 K<S>,51 EZ<S>>
7	8A-CH8-003-010		WINDOW,LCD U<51 U<S>,53 U<L>,52 U<W>>
8	88-CD8-622-010		SPKR,F 77 7OHM 3W
9	8A-CD8-210-010		HLDR,SPKR A
10	8A-CD8-211-010		HLDR,SPKR B
11	84-CD5-215-010		GEAR
12	8A-CD8-021-010		CHAS,CASS<EXCEPT 53 U<L>,52 U<W>>
12	8A-CH8-047-010		CHAS,CASS (L)<53 U<L>>
12	8A-CH8-031-010		CHAS,CASS (W)<52 U<W>>
13	8A-CD9-633-010		CONN ASSY,4P SP
14	8A-CD9-626-010		CONN ASSY,2P DOOR
15	8A-CD8-022-010		PANEL,FR R<EXCEPT 53 U<L>,52 U<W>>
15	8A-CH8-049-010		PANEL,FR R (L)<53 U<L>>
15	8A-CH8-030-010		PANEL,FR R (W)<52 U<W>>
16	8A-CH8-005-010		KEY,CONTROL CD<EXCEPT 53 U<L>,52 U<W>>
16	8A-CH8-046-010		KEY,CONTROL CD (L)<53 U<L>>
16	8A-CH8-027-010		KEY,CONTROL CD (W)<52 U<W>>
17	8A-CD8-014-010		KEY,VOL<EXCEPT 53 U<L>,52 U<W>>
17	8A-CH8-044-010		KEY,VOL (L)<53 U<L>>
17	8A-CH8-025-010		KEY,VOL (W)<52 U<W>>
18	8A-CD8-017-010		KEY,QSOUND
19	8A-CH8-201-010		HLDR,LCD
20	8A-CH8-004-010		KEY,FUNC<EXCEPT 53 U<L>,52 U<W>>
20	8A-CH8-045-010		KEY,FUNC (L)<53 U<L>>
20	8A-CH8-026-010		KEY,FUNC (W)<52 U<W>>
21	8A-CH8-043-010		KEY,CASS (L)<53 U<L>>
21	8A-CH8-024-010		KEY,CASS (W)<52 U<W>>
21	8A-CD8-011-010		KEY,CASS SET<EXCEPT 53 U<L>,52 U<W>>
22	8A-CD8-213-010		SPR-P,REC
23	M8-ZZK-E90-070		DA11T3C
24	8A-CD9-622-010		FF-CABLE, 8P CD-FR
25	8A-CD9-621-010		FF-CABLE, 16P CD-RF
26	8Z-CDB-169-010		PANEL,CD SANYO
27	88-CD9-211-210		RING,CHUCK
28	8Z-CDB-170-010		BASE,CHUCK
29	87-036-368-010		MAGNET
30	84-CT5-209-010		PLATE,MAGNET
31	8Z-CH4-225-110		HLDR,CHUCK A(S)
32	8A-CH8-037-010		BOX,CD (L)<53 U<L>>
32	8A-CH8-018-010		BOX,CD (W)<52 U<W>>
32	8A-CD8-027-010		BOX,CD EX<EXCEPT 53 U<L>,52 U<W>>
33	8A-CH8-038-010		CHAS,CD (L)<53 U<L>>
33	8A-CH8-019-010		CHAS,CD (W)<52 U<W>>
33	8A-CD8-028-010		CHAS,CD EX<EXCEPT 53 U<L>,52 U<W>>
34	8A-CD8-008-010		HANDL,FR<EXCEPT 53 U<L>,52 U<W>>
34	8A-CH8-041-010		HANDL,FR (L)<53 U<L>>
34	8A-CH8-022-010		HANDL,FR (W)<52 U<W>>
35	87-036-389-010		SW,PUSH LOCK
36	8A-CD8-009-010		HANDL,REAR<EXCEPT 53 U<L>,52 U<W>>
36	8A-CH8-023-010		HANDL,REAR (W)<52 U<W>>
37	8A-CD8-208-010		SPR-T,CD
38	84-CD5-216-010		BRACKET
⚠ 39	8A-CD8-603-010		PT,E 2.5W<51 K<S>,51 EZ<S>>
⚠ 39	8A-CD8-602-010		PT,U 2.5W<51 U<S>,53 U<L>,52 U<W>>
40	8A-CD9-630-010		CONN ASSY,4P RPH
41	87-A60-178-010		JACK,AC E W/SW<51 K<S>,51 EZ<S>>
41	87-A60-177-010		JACK,AC U W/SW<51 U<S>,53 U<L>,52 U<W>>
42	87-A90-086-010		COVER,AC-SOCKET
43	88-CD8-209-010		SPR-C,BATT
44	8A-CD8-212-010		HLDR,ANT
45	8A-CD9-620-010		FF-CABLE, 16P FR-MAIN
46	8A-CD8-003-010		LID,BATT<EXCEPT 53 U<L>,52 U<W>>
46	8A-CH8-036-010		LID,BATT (L)<53 U<L>>
46	8A-CH8-017-010		LID,BATT (W)<52 U<W>>
47	8A-CH8-002-010		CABI,REAR<EXCEPT 53 U<L>,52 U<W>>
47	8A-CH8-035-010		CABI,REAR (L)<53 U<L>>
47	8A-CH8-016-010		CABI,REAR U (W)<52 U<W>>
48	8Z-CH4-640-010		ANT,ROD
49	8A-CD9-631-010		CONN ASSY,4P TP-ME
A	87-B10-242-010		UT2+3-30 W/O CR
B	87-641-096-410		UT1+3-10 GLD
C	87-254-097-410		U+3-12 CR
D	87-741-095-410		UT2+3-8 GLD
E	87-342-074-010		UT2+2.6-8
F	87-353-076-210		VT2+2.6-12
G	87-571-032-410		VIT+2-3
H	87-WA5-253-010		W,3.3-10-0.8
I	87-751-094-410		VT2+3-6 W10SL0T
J	87-661-097-410		TAPPING SCREW, VFT1+3-12
k	87-067-566-010		TAPPING SCREW, VFTT+3-6

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange		

TAPE MECHANISM EXPLODED VIEW 1/1

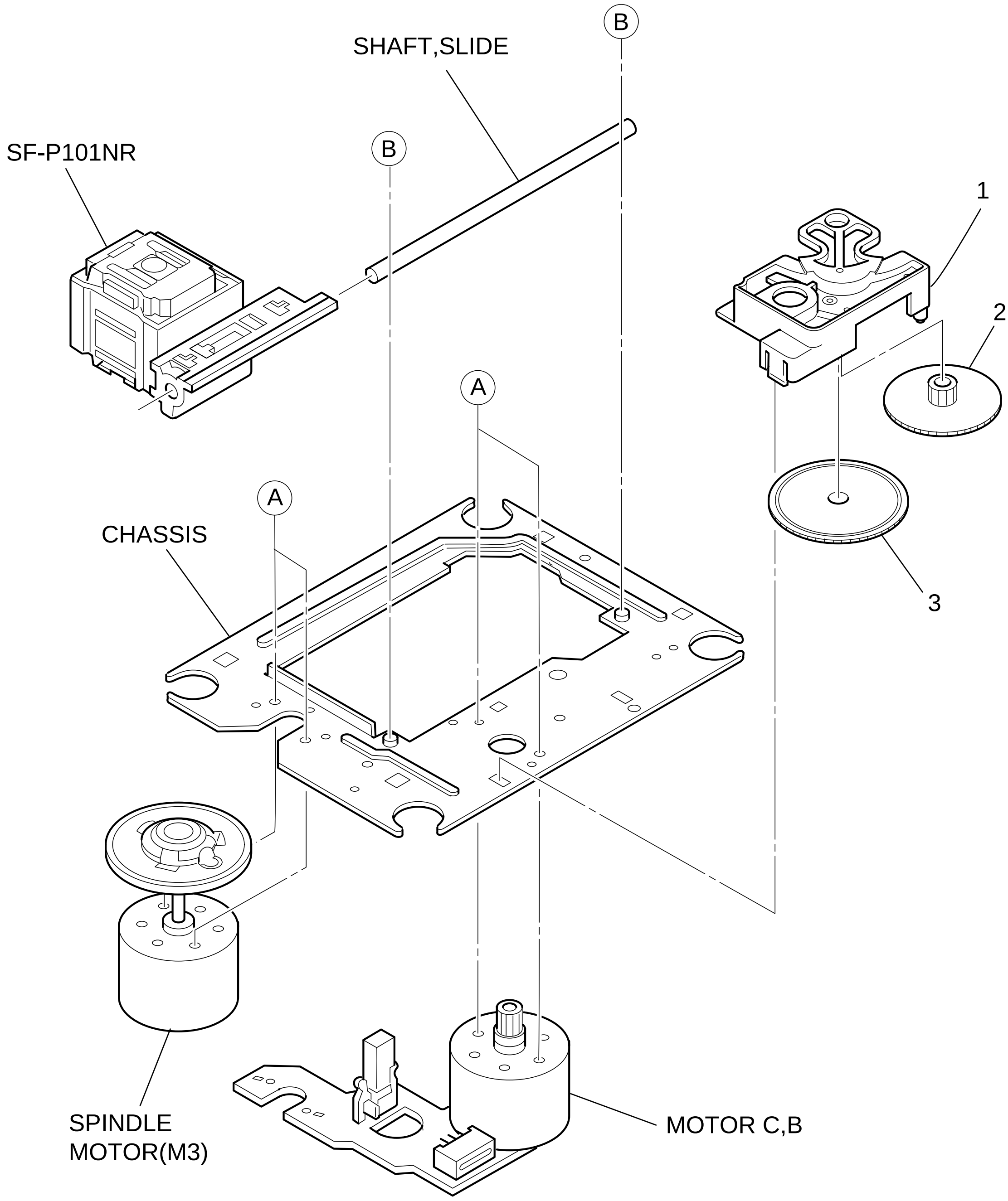


TAPE MECHANISM PARTS LIST 1/1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	S1-921-030-4A0		HEAD BASE
2	S1-821-030-070		AZIMUTH SPRING
3	S1-921-030-090		PANEL P SPRING
4	S1-921-260-050		GEAR PLATE SPRING
5	S1-921-265-020		GEAR PLATE ASSY
6	S1-510-020-020		REC SPRING PLATE
7	S1-921-015-010		CHASSIS ASSY
8	S1-921-030-110		HEAD PANEL
9	S1-921-143-160		BASE ASSY
10	S1-921-141-8A0		M CONTROL SPRING
11	S1-921-260-4A0		SENSING LEVER
12	S1-921-043-100		PINCH ROLLER ARM ASSY
13	S1-921-130-010		EJECT SLIDE LEVER
14	S1-921-141-3A0		P CONTROL SPRING
15	S1-921-140-550		PAUSE LEVER(E)
16	S1-921-140-120		PAUSE LEVER SPRING
17	S1-921-140-110		PAUSE STOPPER
18	S1-921-140-150		BUTTON LEVER SPRING(B)
19	S1-821-011-590		E KICK LEVER
20	S1-921-141-070		BUTTON LEVER SPRING(A)
21	S6-401-011-490		LEAF SW MSW-1541T
22	S1-921-140-090		SWITCH ACTUATOR
23	S1-921-140-080		PUSH BUTTON ACTUATOR
24	S1-921-140-190		PLAY BUTTON LEVER
25	S1-921-030-100		MG ARM SPRING
26	S1-921-140-040		REW BUTTON LEVER
27	S1-921-140-050		FF,BUTTON REVER
28	S1-921-140-060		STOP BUTTON LEVER
29	S1-921-140-600		PAUSE BUTTON LEVER
30	S1-821-100-700		FF GEAR
31	S1-921-050-060		SENSER
32	S1-921-053-100		TAKE UP REEL ASSY
33	S1-829-100-010		PACK SPRING
34	S1-921-050-150		S REEL HUB
35	S1-921-050-220		BACK TENSION SPRING
36	S1-921-140-030		REC BUTTON LEVER
37	S1-921-140-170		P.S.LEVER SPRING
38	S1-921-073-040		RF CLUTCH ASSY
39	S1-921-070-030		RF BELT
40	S1-921-260-020		CAM GEAR
41	S1-921-140-160		E ACTUATOR SPRING
42	S1-921-093-210		FLYWHEEL ASSY
43	S1-921-090-380		MAIN BELT
44	S1-921-120-590		MOTOR PULLEY
45	S6-002-030-220		MOTOR EG530AD-2B
46	S6-209-100-100		E HEAD PH-K380-MS1
47	S1-921-030-050		MG ARM
48	S1-921-140-210		REC BUTTON LEVER SPRING
49	S1-821-100-690		RECORD SAFETY LEVER
50	S1-821-128-9A0		MOTOR BRACKET
51	S1-821-010-500		PLAY BUTTON LEVER SPRING
52	S6-201-011-110		HEAD,RP7442ES-0951
A	S9-P04-200-310		C TAPPING SCREW 2-3
B	S1-921-120-020		MOTOR COLLER SCREW
C	S9-B10-200-510		P TAPPING BIND SCREW M2-5
D	S9-C07-204-510		SCREW,TAPPING(CAMERA)M2-4.5
E	S9-P01-200-610		SCREW,M2-6
F	S9-B01-200-310		(+)BIND SCREW M2-3
G	S9-F08-200-710		AZIMUTH SCREW M2-7
H	S1-921-120-030		MB SCREW
I	S9-W02-300-100		P WASHER CUT 1.2-3.8-0.3
J	S9-W02-500-100		P WASHER CUT 1.45-3.8-0.5
K	S9-W01-400-100		P WASHER 2-3.5-0.4
L	S9-W01-130-200		P WASHER 2.1-4-0.13

CD MECHANISM EXPLODED VIEW 1/1



CD MECHANISM PARTS LIST 1/1

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REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	S2-121-A28-400		COVER GEAR
2	S2-511-A21-000		GEAR MIDDLE
3	S2-511-A21-100		GEAR,DRIVE
A	S1-PN2-03R-OSE		SCR PAN PCS 2-3
B	87-261-073-410		SCR S-TPG FLT 2.6-6
ALL	M8-ZZK-E90-070		DA11T3C

ACCESSORIES/PACKAGE LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
	1	8A-CH8-906-010		IB,EZ(9L)B<51 EZ<S>>
	1	8A-CH8-905-010		IB,K(E)B<51 K<S>>
	1	8A-CH8-903-010		IB,U(ESF)B<51 U<S>,53 U<L>,52 U<W>>
⚠	2	87-A80-036-010		AC CORD SET ASSY,E W/FLTR VOL<51 EZ<S>>
⚠	2	87-A80-034-010		AC CORD SET ASSY,K W/F MAY-BG<51 K<S>>
⚠	2	87-A80-109-010		AC CORD,HK7281 BLK U<51 U<S>,53 U<L>,52 U<W>>

アイワ株式会社 〒110-8710 東京都台東区池之端1-2-11 ☎03(3827)3111 （代表）
AIWA CO.,LTD. 2–11, IKENOHATA 1–CHOME, TAITO-KU, TOKYO 110, JAPAN TEL:03 (3827) 3111

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